

APPROVED BY SUPERVISORY COMMITTEE:

Kernal Larson  
Philip C. Langfeldt  
Winifred  
Burr Burr  
L. L. L. L.

THIS IS AN ORIGINAL MANUSCRIPT  
IT MAY NOT BE COPIED WITHOUT  
THE AUTHOR'S PERMISSION

A DESCRIPTIVE ANALYSIS OF SELECT INPUT BASES OF THE  
FINANCIAL ACCOUNTING STANDARDS BOARD

Completion of this dissertation was aided by  
various individuals and organizations. The work was  
funded by dissertation grants of the American Institute  
of Certified PAUL RICHARD BROWN, A.B., M.P.A. and Asso-  
ciation of Collegiate Schools of Business. To those  
organizations, I appreciated the opportunity to concen-  
trate solely on my research.

Dr. Henry R. DISSERTATION  
Presented to the Faculty of the Graduate School of  
The University of Texas at Austin  
in Partial Fulfillment  
of the Requirements  
for the Degree of  
DOCTOR OF PHILOSOPHY  
I am grateful for their friendship.

I appreciated the assistance provided by com-  
mittee members P.A. Langefeld, R.K. Srivastava, and  
The University of Texas at Austin

December 1979



S. Buchanan. I particularly appreciated the steady guidance of my chairman, E.D. Larson, and committee member, D.F. Newman.

### ACKNOWLEDGMENTS

Completion of this dissertation was aided by various individuals and organizations. The work was funded by dissertation grants of the American Institute of Certified Public Accountants and the American Association of Collegiate Schools of Business. To those organizations, I appreciated the opportunity to concentrate solely on my research.

Dr. Henry R. Jaenicke, professor of business administration at Franklin and Marshall College, was helpful in formulating a portion of the dissertation methodology. The Financial Accounting Standards Board, through Dr. Robert T. Sprouse, made the data used in this project available to me in Austin. These specific acts by Drs. Jaenicke and Sprouse are indicative of their general encouragement and interest in my endeavors; I am grateful for their friendship.

I appreciated the assistance provided by committee members P.A. Langefeld, R.K. Srivastava, and

B. Buchanan. I particularly appreciated the steady guidance of my chairman, K.D. Larson, and committee member, D.P. Newman.

Finally, I commend myself for the ability to persistently follow the theme of the song "Gotta Move" as sung by Barbra Streisand. I'd be a fool, however, not to recognize that my parents were instrumental in providing that ability. Their unceasing and unconditional love deserves the highest of possible accolades.

P.R.B.

The University of Texas

at Austin

July, 1979



## ABSTRACT

Preference input provided the Financial Accounting Standards Board (FASB) on select projects is examined to describe salient characteristics of that input. A research design is developed for describing any systematic groupings or relationships of input preferences, and any changes in groupings or relationships across projects. Correlational evidence is generated for describing any alignment between particular input preferences and FASB policy decisions.

The data base can be summarized as follows. Of the various topics considered by the Board since its inception, nine primary topics are selected for analysis. Within those topics, responses only to the discussion memoranda are examined in all but one case. Exposure draft responses are analyzed for one topic because no discussion memorandum was issued. The analysis is limited to the responses of all those respondents who provided comments on at least seven of the nine projects.



Finally, a set of policy questions is generated for each project. The respondents' positions on the policy questions are extracted from their submissions to the Board, and form the data base for the statistical techniques.

Two statistical techniques are employed to evaluate the data base, multidimensional scaling (MDS) and discriminant analysis (DA). The techniques produce similar results. Both techniques indicate a moderate degree of preference homogeneity for two broad groups of respondents: preparers of financial statements, and attestors to financial statements. No other homogeneous groups are present based on similar preferences.

The techniques also indicate similar findings regarding the FASB's relational position among the respondents. In the MDS maps, the majority of the time the FASB takes on an outlying position. The DA results convey that no consistent alignment is present for any particular group over all the projects. The techniques jointly refute any conclusion that the FASB's decisions consistently mirror either preparer or attestor preferences.



These findings are of interest to several policy bodies. The FASB analyses are usually conducted on a project-by-project basis. On an ex post basis, this research provides an overview of a portion of its constituency base. The descriptive analysis provides the FASB with an indication of its responsiveness to particular parties interested in the accounting standards-setting process.

The findings are also of interest to Congress. Recently, certain committees in Congress have questioned the ability of the FASB to operate as an independent policy body. Nonalignment of FASB decisions with any group preferences can be interpreted as supportive of the Board's attempt to operate as an independent policy body.

4. MULTIDIMENSIONAL SCALING RESULTS. . . . .	92
Composite MDS Results . . . . .	94
Pre-1/1/76 and Post-1/1/76	
Composite Results . . . . .	101
Pre-1/1/76 Composite Map. . . . .	104
Post-1/1/76 Composite Map . . . . .	107
Comparison of Pre-1/1/76 and	
Post-1/1/76 Composite Maps. . . . .	109



## TABLE OF CONTENTS

<u>Chapter</u>	<u>Page</u>
1. INTRODUCTION. . . . .	1
General Statement of Purpose. . . . .	3
Justification of Research . . . . .	5
Organization of the Dissertation. . . . .	9
2. FINANCIAL ACCOUNTING THEORY AND SETTING ACCOUNTING STANDARDS. . . . .	12
Alternative Theories of Financial Accounting. . . . .	13
Policy Bodies in Accounting Prior to the FASB . . . . .	18
FASB Operations . . . . .	29
Summary . . . . .	39
3. METHODOLOGY . . . . .	41
Data Base . . . . .	42
Multidimensional Scaling (MDS). . . . .	57
Discriminant Analysis (DA). . . . .	77
Research Using Similar Methodology. . . . .	85
Summary . . . . .	90
4. MULTIDIMENSIONAL SCALING RESULTS. . . . .	92
Composite MDS Results . . . . .	94
Pre-1/1/76 and Post-1/1/76 Composite Results . . . . .	101
Pre-1/1/76 Composite Map. . . . .	104
Post-1/1/76 Composite Map . . . . .	107
Comparison of Pre-1/1/76 and Post-1/1/76 Composite Maps. . . . .	109



<u>Chapter</u>	<u>Page</u>
APPENDIX D. MDS Maps of Individual Projects. . . .	112
APPENDIX E. Project 1--SFAS No. 2. . . . .	112
Project 2--SFAS No. 5. . . . .	115
APPENDIX F. Project 3--SFAS No. 8. . . . .	118
Project 4--SFAS No. 12. . . . .	121
APPENDIX G. Project 5--General Purchasing Power Accounting . . . . .	123
APPENDIX H. Project 6--SFAS No. 13. . . . .	126
Project 7--SFAS No. 14. . . . .	128
APPENDIX I. Project 8--SFAS No. 15. . . . .	132
Project 9--SFAS No. 19. . . . .	135
APPENDIX J. Overall Analysis of MDS Findings . . . .	137
5. DISCRIMINANT ANALYSIS RESULTS AND COMPARISON TO MULTIDIMENSIONAL SCALING RESULTS. . . . .	142
BIBLIOGRAPHY . . . . .	143
VITA . . . . .	143
DA Results Based on the Two-Group Classification Scheme. . . . .	143
DA Results Based on the Three- Group Classification Scheme. . . . .	148
Summary and Comparison of the DA Results. . . . .	152
Comparison of MDS and DA Results . . . .	154
6. RESEARCH IMPLICATIONS AND LIMITATIONS, AND SUGGESTIONS FOR FUTURE RESEARCH. . . .	157
Implications of Findings . . . . .	158
Data and Methodological Limitations. . . .	164
Suggestions for Future Research. . . . .	167
Overview of the Dissertation . . . . .	169
APPENDIX A. Project Data . . . . .	172
APPENDIX B. Respondent Information . . . . .	175
APPENDIX C. Letters of Comment by Respondents. . . .	180

<u>Chapter</u>	<u>Page</u>
APPENDIX D. Policy Questions . . . . .	181
APPENDIX E. Preference Positions . . . . .	187
APPENDIX F. Pair-wise Comparison Matrices . . . . .	190
APPENDIX G. MDS Input Matrices . . . . .	242
APPENDIX H. Discriminant Analysis Input . . . . .	255
APPENDIX I. Stress Values . . . . .	258
APPENDIX J. Classification Functions for Two-Group Scheme . . . . .	259
APPENDIX K. Classification Functions for Three-Group Scheme . . . . .	262
BIBLIOGRAPHY . . . . .	265
VITA . . . . .	273
8. Correct Classification of Respondents for Three-Group Scheme . . . . .	149
9. FASS Alignment for Three-Group Classification Scheme . . . . .	151



## LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. List of Respondents . . . . .	51
2. Data Base for Empirical Research . . . . .	56
3. Pair-wise Comparison Positions . . . . .	72
4. Bases for MDS Matrices . . . . .	74
5. <u>A Priori</u> Grouping Schemes . . . . .	79
6. Correct Classification of Respondents for Two-Group Scheme . . . . .	145
7. FASB Alignment for Two-Group Classification Scheme . . . . .	147
8. Correct Classification of Respondents for Three-Group Scheme . . . . .	149
9. FASB Alignment for Three-Group Classification Scheme . . . . .	151
10. MDS Map for SPAS No. 12 . . . . .	122
11. MDS Map for SPAS No. 13 . . . . .	127
12. MDS Map for SPAS No. 14 . . . . .	129
13. MDS Map for SPAS No. 15 . . . . .	133
14. MDS Map for SPAS No. 16 . . . . .	136
15. MDS Map for SPAS No. 17 . . . . .	136

## LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1. Example of Two-Dimensional MDS Map . . . . .	59
2. Example of Stress-Dimensionality Plotting.	66
3. DA Output Steps. . . . .	82
4. Composite MDS Map. . . . .	95
5. Pre-1/1/76 Composite Map . . . . .	105
6. Post-1/1/76 Composite Map. . . . .	106
7. MDS Map for <u>SFAS No. 2</u> . . . . .	113
8. MDS Map for <u>SFAS No. 5</u> . . . . .	116
9. MDS Map for <u>SFAS No. 8</u> . . . . .	119
10. MDS Map for <u>SFAS No. 12</u> . . . . .	122
11. MDS Map for General Purchasing Power Project. . . . .	124
12. MDS Map for <u>SFAS No. 13</u> . . . . .	127
13. MDS Map for <u>SFAS No. 14</u> . . . . .	129
14. MDS Map for <u>SFAS No. 15</u> . . . . .	133
15. MDS Map for <u>SFAS No. 19</u> . . . . .	136



Statements of Financial Accounting Standards designed to establish or improve standards of financial accounting and reporting for the guidance and education of the public.

## CHAPTER 1

users of financial information, investors, creditors, educators, and government (1978, p. 1).

### INTRODUCTION

The operating procedures of the FASB are based on

the general Accounting standards in the United States are established through a complex arrangement involving both the public and private sectors of society. Watts and Zimmerman state that the parties involved in the standard-setting process include:

Agencies of the Federal government (notably the Securities and Exchange Commission and Treasury Department), state regulatory commissions, public accountants, quasi-public accounting standard-setting board (the Committee on Accounting Procedures (CAP), the Accounting Principles Board (APB), and the Financial Accounting Standards Board (FASB)), and corporate managements (1978, p. 112).

Other writers, especially Horngren (1972, 1973, and 1976), also address the public-private arrangements for setting standards.

Since the inception of the FASB, there has been substantial public participation in the standards-setting activities of the Financial Accounting Standards Board process. Responses to discussion memoranda and exposure drafts and testimony at public hearings constitute such process. The FASB issues

of the participation. The input responses detail the

participants' opinions on the accounting issues under



Statements of Financial Accounting Standards designed to establish or improve standards of financial accounting and reporting for the guidance and education of the public, including issuers, attestors and users of financial information, investors, creditors, educators, and government (1978, p. 1).

The operating procedures of the FASB are based on the general concept of "due process." The procedures for addressing select accounting issues include: establishing a task force of knowledgeable individuals related to the particular issue; sponsoring appropriate research; preparing a discussion memorandum that details the accounting alternatives; holding one or more public hearings; issuing an exposure draft of a proposed standard; and issuing a final policy decision. The due process procedures are designed

to permit timely, thorough, and open study of financial accounting and reporting issues and to encourage broad public participation in the accounting standards-setting process by creating channels of opinion at all stages of the process (FASB, 1978, p. 2).

Since the inception of the FASB, there has been substantial public participation in the standards-setting process. Responses to discussion memoranda and exposure drafts and testimony at public hearings constitute much of the participation. The input responses detail the participants' opinions on the accounting issues under



consideration. To the extent the FASB operates as a social choice mechanism in a democratic society (discussed in Chapter 2), then it must attempt to reconcile any conflicting opinions so that the resulting standards will have widespread support. This reconciliation objective is especially difficult to accomplish when the preferences expressed by respondents are diverse and/or contradictory.

#### General Statement of Purpose

A major objective of this study is to describe salient characteristics of preferences expressed by respondents. Preference positions of respondents are available in letters of comment provided the FASB on select projects. In this study, a portion of the FASB's input base is examined for the purpose of describing characteristics (such as the degree of respondent homogeneity or heterogeneity) of the base that may otherwise be obscured in the raw data. Three general research questions direct the descriptive analysis:

1. Are there systematic groupings or relationships of input preferences for select accounting issues addressed by the FASB?



2. Are there changes in groupings or relationships of input preferences across select accounting issues addressed by the FASB?

3. Is there correlational evidence between particular input preferences and FASB policy decisions?

Cost-benefit considerations and other factors, as discussed in Chapter 3, point toward a research design based on a subset of the total input base used by the FASB. For select issues addressed to date by the FASB, respondents' preferences are extracted from their submissions to the Board. A judgmental sample of respondents is drawn, and the input responses from that sample are evaluated as to their preference positions on policy questions related to each FASB project. The input data base for the research, therefore, consists of the respondents' positions on each of the policy questions.

The data are analyzed using two statistical techniques, multidimensional scaling and discriminant analysis. The data base is the same for both methodologies. Multidimensional scaling is employed to describe any systematic groupings or relationships of input preferences, and any changes in groupings across issues. Discriminant analysis is used to establish any correlation



between particular input preferences and FASB policy decisions.

### Justification of Research

Certain changes in the operating environment of accountants, discussed in this and subsequent chapters, and changes in the interdisciplinary interests of accountants, have generated a recent interest in standards-setting research. Nevertheless, little research has been conducted on the process of setting accounting standards. Three related, but different, justifications exist for the standards-setting research of this dissertation. To some extent, these justifications apply to any research dealing with the standards-setting process.

First, the American Accounting Association Committee on Concepts and Standards for External Financial Reports, drawing heavily on Kuhn (1970), concludes that consensus is lacking on any particular accounting theory (1977, ch. 4). A discussion of alternative theory approaches to financial accounting is included in Chapter 2. In striving toward theory acceptance, both inductive and deductive approaches are employed by researchers. Kuhn (1970) discusses the intricate relationship between



observable phenomena (generated from inductive research) and theoretical models (general from deductive research) that leads to theory acceptance. This research potentially enhances theory acceptance via the inductive route. It provides observable phenomena that may facilitate both hypothesizing theories of financial accounting, and confirming or refuting existing theories. Watts and Zimmerman (1977) and (1978) have conducted similar research and also have attempted to fit their findings into a particular theory of financial accounting.

One current theory of financial accounting is labeled "information economics" by the American Accounting Association Committee (1977). A second justification for the research can be grounded in that theory. The role of input preferences in setting accounting standards is especially important within the information economics theory, but little is known about characteristics of those preferences. The research of this dissertation provides a descriptive analysis of select input preferences. Finally, both the American Accounting Association

Committee Research of this nature has been suggested by several accounting researchers. In social choice



terminology, they address the assumption of heterogeneous users of financial accounting information: Cushing states:

Our basic premise . . . has been that the assumption of complete diversity of tastes and beliefs among individuals, in society in general, and among financial statements users, in particular, may not be warranted. This premise raises issues of an empirical nature, and also suggests the question of what alternative assumptions about users and beliefs are possible. Obviously those logical issues are related closely to the empirical issues--perhaps a combined attack on them would prove most fruitful (1977, p. 313).

May and Sundem emphasize the benefits of predicting individual preferences through homogeneity of preference research:

Most likely, information (research) produced for accounting policy decisions will consist of evidence relevant to predictions of consequences of various groups of similarly affected individuals, along with evidence relevant to predictions of the preferences (or at least the direction of preferences) of the same groups for such consequences (1976a, p. 755).

They repeat the appropriateness of such research in an unpublished manuscript devoted exclusively to the determination of accounting policy (1976b, p. 12).

Finally, both the American Accounting Association Committee (1977, p. 2) and Demski and Feltham (1976, p. 217) recognize the dearth of empirical research grounded



in information economics. Little evidence is available about both the characteristics of respondents' preferences, as discussed above, and the FASB's response to those preferences.

The third justification is on a more pragmatic level. This research describes characteristics of respondents' preferences that are of concern to several policy-making bodies. As is discussed in detail in Chapter 2, the FASB is interested in preferences of its constituency.

The operating procedures of the Standards Board are designed to permit timely, thorough, and open study of financial accounting and reporting issues and to encourage broad public participation in the process of establishing and improving standards of financial accounting and reporting.

The objective of the Board's policy of openness and broad public participation in the accounting standards-setting process is to stimulate consideration and debate within the Board's constituency on matters of significance to the public (1978, p. 8).

Chapter 2 includes a discussion of alternative theories of financial accounting. The process of refined analysis of respondents' preferences over select setting accounting standards is considered an integral issues.

In recent years, Congress has also shown an interest in the responsiveness of the FASB to individual preferences. Apparently, Congress is interested in how



select respondents' positions relate to each other, and how the FASB incorporates those positions in its decision-making process. In both the Moss report (1976a) and the Metcalf report (1976b), the FASB has been accused of being unduly influenced in its policy-making process by certain sectors of society. The staff preparing the Metcalf report, for example, concluded that the responses of the big eight public accounting firms are weighed too heavily in the FASB's policy-making process (1976b, p. 158). It appears, therefore, the Congress and possibly other public sector bodies are interested in descriptive analyses of respondents' preferences and the FASB's response to those preferences.

#### Organization of the Dissertation

The remainder of the dissertation is organized as follows. Chapter 2 includes a discussion of alternative theories of financial accounting. The process of setting accounting standards is considered an integral dimension to financial accounting, and the chapter includes a historical perspective of policy bodies previous to the FASB. A review of FASB operations follows,



with those operations evaluated in context of the information economics approach to accounting theory.

The methodology of the descriptive research is developed in Chapter 3. Two main factors are involved in describing the methodology: (1) the data base, and (2) the statistical techniques. Both features of the methodology are discussed to allow the reader to evaluate the benefits and potential limitations of the research findings.

The results of the research are presented in Chapters 4 and 5. The statistical techniques employed, multidimensional scaling and discriminant analysis, both indicate a moderate degree of preference homogeneity for two broad groups of respondents: preparers of financial statements, and attestors to financial statements. No other homogeneous groups are present. This includes such possible groups as the sponsoring organizations of the FASB, or public accounting firms and their auditing clients.

The multidimensional scaling techniques reveal minimum correlation between FASB decisions and preferences of many of the respondents. The discriminant



analysis results convey that no consistent alignment is present for any particular group and the FASB.

The implications of the research findings are discussed in Chapter 6. That chapter also includes suggestions for further research, and a discussion of the limiting features of this study.

"tation" dilemma that is aptly described by the American Accounting Association Committee on Concepts and Standards for External Financial Reports (AAA Committee).

The current accounting scene includes a wide diversity of issues that are deemed to be important by individual researchers; it also includes a wide diversity of research methods employed to address these issues. Such diversity is pervasive. Some authors, for example, consider the issues raised by others to be trivial and undeserving of attention. Similarly, debate on the relative merits and weaknesses of alternative research methods produces a constant stream of argumentative articles, speeches, and speeches. In terms of Kahn's description, this state of affairs would suggest that accounting theorists do not have a shared paradigm (1977, p. 100).

This chapter of the dissertation addresses the diverse research perspectives taken by financial accounting theorists. An integral dimension to accounting theory is the process of setting financial accounting standards; therefore, a brief history and analysis



## CHAPTER 2

### FINANCIAL ACCOUNTING THEORY AND SETTING

#### ACCOUNTING STANDARDS

Financial accounting researchers face an "orientation" dilemma that is aptly described by the American Accounting Association Committee on Concepts and Standards for External Financial Reports (AAA Committee).

The current accounting scene includes a wide diversity of issues that are deemed to be important by individual researchers; it also includes a wide diversity of research methods employed to address these issues. Such diversity is pervasive. Some authors, for example, consider the issues raised by others to be trivial and undeserving of attention. Similarly, debate on the relative merits and weaknesses of alternative research methods provokes a constant stream of argumentative articles, symposia, and speeches. In terms of Kuhn's description, this state of affairs would suggest that accounting theorists do not have a shared paradigm (1977, p. 42).

This chapter of the dissertation addresses several of the diverse research perspectives taken by financial accounting theorists. An integral dimension to accounting theory is the process of setting financial accounting standards; therefore, a brief history and analysis of



policy bodies in accounting also follows. Finally, FASB operations are evaluated within one theory perspective, the information economics approach.

#### Alternative Theories of Financial Accounting

Beaver and Demski (1974) establish three categories of theoretical approaches, as does the AAA Committee (1977). There is roughly a one to one correspondence between the two classification schemes. Beaver and Demski are advocates of one of the approaches; the AAA Committee, however, details the approaches to add credence to its subsequent conclusions. These three theoretical categories are normatively based, whereas a fourth category is represented by the descriptive approach of Watts and Zimmerman (1978).

The first category (1), labeled the "truth approach" by Beaver and Demski and the "classical models" by the AAA Committee, has traditionally provided the theoretical base for accounting. The AAA Committee decomposes this approach into two categories: the normative writers (1a) and the inductive writers (1b). The category, as defined by Beaver and Demski, includes only the normative dimension. The AAA Committee states:



The former (normative approach) attempts to formulate implicit accounting models of global application, while the latter (inductive approach) attempts to rationalize, and sometimes even to justify (by the interposition of normative deductive reasoning), major elements of extant accounting practice (1977, p. 10).

Examples of writers included in the first category are Paton (1922), MacNeal (1939), and more recently, Edwards and Bell (1961).

In recent years, however, there has been a shift away from the first approach (1). The second approach (2) is labeled "decision usefulness" by the AAA Committee and "decision models" by Beaver and Demski. Again, the AAA Committee defines two main branches of the category: decision models (2a) and decision makers (2b). It appears that Beaver and Demski encompass both categories in their use of the decision models term. Generally, the second approach (2a and 2b) emphasizes the usefulness of accounting information to certain investors and attempts to produce information conducive to those investors. From a decision model (2a) perspective, "information relevant to a decision model or criterion is isolated and various accounting alternatives are compared to the data presumably necessary for implementing



these decision models" (AAA Committee, 1977, p. 10).

Work by the American Accounting Association Committee to Prepare a Statement of Basic Accounting Theory (1966) and Revsine (1973) are examples of decision model orientations.

In contrast to emphasizing decision models (2a), the decision maker category (2b) emphasizes the users' reactions to alternative accounting information sets to arrive inductively at the apparently preferred information set. This analysis can be performed at both the micro level (behavioral research) and macro level (aggregate market-level research). There are a myriad of research dimensions and researchers in the decision maker sub-category.

A third approach (3) to a theory of financial accounting, labeled "information economics" by the AAA Committee and "decision-theoretic" by Beaver and Demski, is new to accounting and has received only sparse discussion in the literature. In this approach, accounting information is viewed as an economic commodity; the production and consumption of the information is a problem of economic choice (AAA Committee, 1977, p. 21).



As is stated in Chapter 1, the descriptive research of this dissertation particularly relates to the information economics approach. In addition, the process of setting standards is a more integral aspect of the information economics approach than any other approach. Therefore, a relatively detailed analysis of the approach is included in the discussion of FASB operations later in this chapter.

A fourth theoretical approach (4), not included in the schemata of Beaver and Demski or the AAA Committee, is espoused by Watts and Zimmerman. They are interested in developing a theory of the standards-setting process, as explained in the following passage:

Ultimately, we seek to develop a positive theory of the determination of accounting standards.<sup>1</sup> Such a theory will help us to understand better the source of the pressures driving the accounting standard-setting process, the effects of various accounting standards on different groups of individuals and the allocation of resources, and why various groups are willing to expend resources trying to affect the standard-setting process. This understanding is necessary to determine if prescriptions from normative theories (e.g., current cash equivalents) are feasible (1978, pp. 112-13).

---

<sup>1</sup>See Jensen (1976) and Horngren (1976).



Because the Watts and Zimmerman approach emphasizes the determination of accounting standards, it is not directly comparable to the other approaches. Only the third approach, information economics, explicitly incorporates standard-setting in the formation of accounting theory. Several writers, notably Beaver and Demski (1974, p. 171fn) and Gonedes and Dopuch (1974, p. 117), recognize the importance of the standards-setting process, and presumably the actors involved in the process, to formulating accounting theory. However, the approach of Watts and Zimmerman is unique from the other three approaches in that it both: (1) emphasizes exclusively the process of setting standards; and (2) provides a descriptive, or inductive, approach to theory building; that is, it has no normative base as in some of the other approaches.

Advocates can be found for each of the four approaches presented here. The four approaches also convey a transitory state of accounting theory that leaves the researcher in a difficult situation. As discussed in Chapter 1, the empirical research of this dissertation is supportable on several dimensions. The



purpose of the research is not an attempt to defend one of the four approaches. It does appear, however, that the research is most directly related to the third (information economics) and fourth (Watts and Zimmerman) approach. Interesting insights may be gained from the work, regardless of which approach is espoused by the reader.

#### Policy Bodies in Accounting Prior to the FASB

The FASB is the profession's third formal policy body in financial accounting. The Committee on Accounting Procedure (CAP) (1938-59), and the Accounting Principles Board (APB) (1959-73) preceded the FASB. Operations of the CAP and APB provide a historical perspective to the evaluation of FASB operations.

According to Jennings (1958, p. 30) and Carey (1970, vol. 2, p. 16), the CAP was organized as a direct result of the New York Stock Exchange and the Securities and Exchange Commission (SEC) prodding the profession. The SEC, established in the aftermath of the great crash of 1929 and the subsequent depression, turned to the



accounting profession to improve reporting practices.

The objectives of the CAP were:

1. To further development of recognition of generally accepted accounting principles, and
2. To narrow areas of difference and inconsistency in accounting practices (Jennings, 1958, p. 30).

It appears that the CAP gave little consideration to any input outside its members. In discussing the rules of the Committee, Jennings states:

The rules provided further that the committee should give careful consideration to prior opinions, to prevailing practices, and to the views of professional and other bodies concerned with accounting procedures before reaching a conclusion in a particular instance (1953, p. 30).

He concludes, however, that the CAP did not succeed in obtaining views of parties interested in the operations of the CAP (1958, p. 31).

A review of the 51 bulletins issued by the CAP during its life indicates a tendency to codify what was already existing practice. Carey states:

The Accounting Research Bulletins soon had a visible influence on corporate accounting. While they did not establish uniform practices, they did gradually narrow the areas of difference by indicating preferred treatments among alternatives which up to then had had support in precedent (1970, vol. 2, p. 16).



Shortly after the formation of the CAP, the American Accounting Association published An Introduction to Corporate Accounting Standards, authored by Paton and Littleton (1940). The monograph "was a rationalization of then extant practice, explicated at a level of theoretical abstraction that had known few precedents" (AAA Committee, 1977, p. 9). Carey (1970, p. 16) labels the work an influential treatise during the period of the CAP operations, and the AAA Committee labels it "probably the most influential work in American accounting literature" (1977, p. 9). It appears reasonable to conclude that the CAP was strongly guided by Paton and Littleton's monograph. That monograph, however, was merely a codification of existing practice, and did not recommend any major changes in the fundamental principles or tenets of accounting. It is possible, therefore, that the accounting topics and alternatives considered by the CAP were limited to the status quo orientation of the monograph.

In the early 1950s, the CAP and the accounting profession were attacked by both governmental and non-governmental sources for its nonresponsiveness to the



changing environment. Financial reporting requirements were not keeping pace with the changing times. As Jennings states, "Good business practices and good accounting cannot long be at substantial variance (1958, p. 31). The CAP was criticized for not keeping pace with the business environment. The profession in general was criticized for not providing a proper forum or resources for keeping that pace. The American Institute of Certified Public Accountants (AICPA) appointed a committee (the Powell Committee) to review the promulgation of accounting principles. The Powell report (1958) recommended the CAP be disbanded and replaced by a new organization, the APB. That took place in 1959.

As stated above, the blueprint for the APB was provided by the Powell report. It was a detailed report that included recommendations as to voting procedures, dissents, public hearings, exposure of tentative conclusions, etc. Two aspects of the report, however, were pervasive. The first related to the role research should play in setting accounting standards. In fact, the Powell report was formally titled, "Report to Council of the Special Committee on Research Program" (1958, p. 62).



Following the suggestion of Jennings, who stated earlier in the year that the "development of accounting principles should be regarded as in the nature of pure research" (1958, p. 43), the Powell report recommended that research play a pivotal role in setting standards. The committee members concluded that

the accounting research program should be one of the most important activities of the Institute (AICPA). Pronouncements on accountings matters should be based on thoroughgoing, independent study of the matters in question (1958, p. 63).

The role research actually played in the day-to-day operations of the APB is discussed subsequently.

The second fundamental aspect of the Powell report concerned a specific APB project. The committee stated:

The broad problem of financial accounting should be visualized as requiring attention at four levels: first, postulates; second, principles; third, rules or other guides for the application of principles in specific situations; and fourth, research (1958, p. 63).

The committee then recommended:

Immediate projects of the accounting research staff should be a study of the basic postulates underlying accounting principles generally, and a study of the broad principles of accounting. The results of these, as adopted by the Board, should serve as a



principle foundation for the entire body of future pronouncements on accounting matters, to which each new Powell release should be related (1958, p. 64).

The committee, therefore, was recommending that a conceptual framework be established for accounting.

The research staff of the APB, as recommended by the Powell report, emphasized postulate research. Two research studies (Moonitz, 1961; and Moonitz and Sprouse, 1962) were related to the fundamentals of financial accounting. The purpose of the studies was to facilitate, or provide the input for, issuance of APB opinions. The APB did not issue an opinion on the fundamentals of financial accounting, but instead issued APB Statement No. 4, "Basic Concepts and Accounting Principles Underlying Financial Statements of Business Enterprises." Statements of the APB, however, were not subject to the reporting and auditing rules established by the AICPA for its members (Council of the Institute, Special Bulletin, October 1964). In effect, implementation of APB statements was optional. Consequently, the 15 year existence of the APB did not include an opinion, or set of opinions, establishing a conceptual framework for accounting. The



primary charge of the APB, given to it through the Powell Report, was never met. Criticism of the APB increased as each year passed without meeting that charge. and in 1973 the FASB became the new standards-setting Concurrent with attempting to develop a conceptual framework, the APB sponsored other research on more narrow topics. Research studies were completed on such topics as extractive industry accounting, lease accounting, and accounting for business combinations. The opinions of the APB did not keep up with the research, however, and in some cases the research was ignored by the APB. Again, the APB was criticized for neglecting the inherent nature research should play in establishing accounting standards. and 1973) to reach this goal.

Gerboth Both criticism of the APB failing to meet its charges and certain environmental factors peaked in the early 1970s. In 1971, the AICPA established a committee to "consider how the AICPA's standards-setting role can be made more responsive to the needs of those who rely on financial statements" (Wheat report, 1972, p. 93). The committee report recommended that the APB be disbanded and replaced by a new organization, the FASB.



Substantial changes in the design and operations of the standards-setting body were recommended by the Powell Report. The recommendations were accepted by AICPA members, and in 1973 the FASB became the new standards-setting body of the profession.

Many accountants have speculated on the demise of the APB. Gerboth (1972 and 1973), during the transition period between the APB and FASB, provided some interesting thoughts on standards-setting. The demise of the APB, according to Gerboth, stemmed from a "general failure to perceive the proper relationship between research and decision-making in accounting inquiry" (1973, p. 478). He draws heavily on work of Lindblom (1958, 1959, and 1963) to reach this conclusion. Gerboth believes Jennings, and others, viewed accounting from too narrow a perspective to suggest that research was the answer to all ills. One reason for the downfall of the APB appears to be the unrealistic expectations of the Powell committee and APB critics as to the role of research.

A second reason for the downfall of the APB concerns its efforts to establish a conceptual framework of



accounting. As stated earlier, the Powell report listed this project as the primary task of the APB. The methodology employed to address this task is labeled the comprehensive approach by Lindblom. This approach attempts to solve problems by understanding them completely. To implement the approach, three aspects of the problem must be known.

1. Objectives. A set of clearly defined objectives is required to provide policy-makers with goals. . . .
2. Theory. Also required is a body of theory to provide a framework for analyzing a problem. . . .
3. Consequences. Finally, the comprehensive approach requires policy-makers to know the consequences of alternate courses of actions (Gerboth, 1972, p. 43).

According to Lindblom, the comprehensive approach is unworkable. As a viable alternative, Lindblom suggests disjointed incrementalism, and states:

The first of these two approaches (comprehensive approach) is of course impossible. Although such an approach can be described, it cannot be practiced except for relatively simple problems and even then only in a somewhat modified form. It assumes intellectual capacities and sources of information that men simply do not possess, and it is even more absurd as an approach to policy when the time and money that can be allocated to a policy problem is limited, as is always the case (1959, p. 80).



In an article co-authored by Lindblom and Hirschman, they list ten major characteristics of disjointed incrementalism, an alternative to the comprehensive approach.

- A. Attempt at understanding is limited to policies that differ only incrementally from existing policy.
- B. Instead of simply adjusting means to ends, ends are chosen that are appropriate to available or nearly available means.
- C. A relatively small number of means (alternative possible policies) is considered, as follows from A.
- D. Instead of comparing alternative means or policies in the light of postulated ends or objectives, alternative ends or objectives are also compared in the light of postulated means or policies and their consequences.
- E. Ends and means are chosen simultaneously; the choice of means does not follow the choice of ends.
- F. Ends are indefinitely explored, reconsidered, discovered, rather than relatively fixed.
- G. At any given analytical point ("point" refers to any one individual, group, agency, or institution), analysis and policy making are serial or successive; that is, problems are not "solved" but are repeatedly attacked.
- H. Analysis and policy making are remedial; they move away from ills rather than toward known objectives.
- I. At any one analytical point, the analysis of consequences is quite incomplete.
- J. Analysis and policy making are socially fragmented; they go on at a very large number of separate points simultaneously (1962, pp. 215-216).



The most noticeable aspect of these characteristics is the absence of a comprehensive approach to any particular policy. The recent past provides the best guide for the future. Incrementalism inherently involves small changes, part of an endless sequence of changes.

Lindblom does not offer this descriptive analysis of the policy-making process in a negative context. He believes a tolerable level of rationality is achieved by establishing policy on an incremental basis. More importantly, he recognizes the extreme difficulty of applying the comprehensive approach, and sets out to offer a workable alternative. An excellent example of Lindblom's general concept applied in a specific policy area is discussed by Wildavsky (1964).

A second reason for the downfall of the APB, therefore, appears to relate to its attempt at the near impossible. The criticism of the APB on the issue of developing a conceptual framework is unfounded given the severity of the task. Nevertheless, the critics were merely responding to a task, established by the APB, but not achieved.



term. The review of CAP and APB operations indicated the profession is incapable of maintaining a policy body over a long period of time. Many people in the business community believe the FASB, a relatively new organization, is the profession's last chance to retain a degree of standards-setting control in the private sector of society. The following section of the chapter includes a review of FASB operations, and a comparison of FASB operations with operations of its predecessor bodies, particularly the APB.

#### FASB Operations

The introductory remarks to the dissertation include a brief description of the operating procedures of the FASB. Many characteristics of the FASB were not present in previous policy bodies. Those characteristics are described in this section. FASB operations are then evaluated in context of the information economics approach to accounting theory.

The FASB represents the first time members of an accounting standards board have served in a full-time capacity. FASB members are required to sever all former employer ties, and serve a renewable five-year



term. Potential members must "have knowledge of accounting, finance and business and a concern for the public interest in matters of financial accounting and reporting" (FASB, 1978, p. 48). They are aided by a full-time technical and administrative staff, and an outside advisory council. The Board is funded by an independent organization that solicits contributions from public accounting firms, corporations, brokerage houses, academe, and others.

Before the FASB can issue a Statement of Financial Accounting Standards, it is required to follow extensive due process procedures. According to the FASB, the due process procedures "in many ways are more stringent than the requirements of the Federal Administrative Procedure Act" (Status Report, April 9, 1979). To document that the Board's procedures are diligently followed, a public record is maintained by the FASB staff.

Recently, the Board revised many of its operating procedures as a result of the Financial Accounting Foundation's (FAF) extensive review of FASB operations to date (through April 1977). The changes are detailed in the June 21, 1978 Status Report, but the trend is



obvious: the FASB is attempting to encourage or facilitate broader public support of its activities. As an example, the FAF recommended and the Board adopted a policy of discussing in public the issues it is deliberating (1977, p. 22). Before the recommendation, the FASB imposed a gag rule on all its members and staff. As another example, the FASB adopted a plan to announce the agenda of all Board meetings in advance, and those meetings are open to the public.

It appears clear, at least ostensibly, that the FASB desires an open study of financial accounting alternatives with as much public participation as can be generated. In Statement of Financial Accounting Concepts No. 1, "Objectives of Financial Reporting by Business Enterprises," the FASB details a large base of potential constituents interested in their activity.

Many people base economic decisions on their relationships to and knowledge about business enterprises and thus are potentially interested in the information provided by financial reporting. Among the potential users are owners, lenders, suppliers, potential investors and creditors, employees, management, directors, customers, financial analysts and advisors, brokers, underwriters, stock exchanges, lawyers, economists, taxing authorities, regulatory authorities, legislators, financial press and reporting agencies, labor unions, trade associations,



business researchers, teachers and students, and the public (November 1978, p. 11).

The nucleus of the constituency base of SFAC No. 1 can be found in APB Statement No. 4. In that statement, the APB concluded:

Financial statements are the means by which the information accumulated and processed in financial accounting is periodically communicated to those who use it. They are designed to serve the needs of a variety of users, particularly owners and creditors (October 1970, par. 10).

A detailed review of APB Statement No. 4 and SFAS No. 1 reveals, however, that the FASB has taken on a much broader perspective to setting standards than was envisioned by the APB members. The CAP issued no formal pronouncements on its perceived constituency base.

Unfortunately, it is unclear how FASB members actually make decisions, and what factors are important in reaching those decisions. The role of public input in the process could only be determined through a behavioral analysis of Board deliberations. A number of things are clear from this analysis of FASB operations, however. The FASB has established the necessary forum for viewing standards-setting as a problem of public choice. Public participation, via input to the FASB, is



an integral dimension to FASB operations. In information economics parlance, the FASB is a nonmarket, social choice mechanism committed to pluralistic, or democratic values. Accounting standards constitute a good derived from the preferences of societal members; the FASB's role is to aggregate those preferences. The following paragraphs expand on the link between FASB operations and the information economics approach.

The information economics approach treats accounting information "as a conventional economic commodity, the acquisition of which constitutes a problem of economic choice" (AAA Committee, p. 21). In other words, accounting information is endogenous to the problem of determining what financial information will be produced and reported by entities. Accounting information will be produced up to the point of marginal cost-benefit equality.

In a capitalist society, the production and consumption of many goods is determined by the market mechanism. Hence, economic resources are allocated via the market mechanism in a manner that results in a particular pattern of production and consumption of various goods.



In evaluating whether or not the market mechanism provides a socially efficient allocation of resources, the criterion usually employed is Pareto optimality. In the case of some goods, the market mechanism is deemed to result in an inefficient allocation of resources, and a "nonmarket" mechanism is substituted. A specified system of voting is, for example, a nonmarket mechanism. Both market and nonmarket mechanisms involve a process of aggregating the preferences of societal members to form a basis for societal preference. Thus, both market and nonmarket mechanisms are referred to as "social choice methods."

In an accounting framework, the respondents' preferences expressed to the FASB presumably reflect preferences of societal members. They may not represent the complete set of societal preferences, however. The FASB constitutes the voting, or nonmarket, mechanism for aggregating preferences.

The most efficient means of producing goods (using Pareto optimality as the efficiency criterion) varies depending on certain characteristics of the goods. Kamien et al., among others, emphasize the spectral



nature of goods, from purely private goods to purely public goods (1973, p. 217). The degree of external effects determines the good's location on the spectrum. The AAA Committee defines externalities as "interdependencies that are not properly mitigated by the prevailing market structure" (1977, p. 23). Public goods, for example, are an extreme point on the externality spectrum. In the case of a purely public good, if one consumer purchases the goods, all other consumers benefit from that good without cost and without being excluded from using that good. The other extreme, purely private goods, is characterized by control of consumption benefits by the consumer, with only one individual benefiting from that good. The existence of external effects may generate the need for market intervention to achieve efficiency.

Pareto Accountants do not agree as to the location of accounting information on the public to private goods spectrum. The AAA Committee makes the following observation:

Analysis indicates that financial accounting information shares much in common with the more traditional examples of externalities. Its use by one does not necessarily preclude subsequent enjoyment



by others. Once produced, an annual report or newspaper may be read by numerous individuals. And in the extreme, its value to any specific individual may be completely independent of who else possesses it (1977, p. 24).

They subsequently conclude that externally reported financial information is a public good, the extreme case of externality effects (1977, p. 25).

Gonedes and Dopuch were among the first accountants to explicitly label financial accounting information a public good.

One of the basic problems in considering the market for the results of information production is that, unlike "private" goods, one person's use of produced information does not reduce the amount of produced information that is available for other users. In short, produced information is a public good (1974, p. 65).

The Gonedes and Dopuch work is somewhat unique in that they vary the characteristics of produced information and consider the efficiency of the market mechanism (with Pareto optimality the only criterion for efficiency) for each case. The scenario closest to the actual accounting production environment includes public good characteristics of the produced information and reveals that the market mechanism is not an efficient means of production.



In contrast, Milne and Watts question the public good assumption regarding accounting information. In their opinion, observable phenomena, such as financial services and newspapers, appear consistent with the private good model for accounting information. They conclude:

Consequently, we suggest that those who would use the public good model of corporate disclosure for public policy or methodological purposes have a substantial task to fulfill first, i.e., to demonstrate that the public good model is empirically superior to the private good model (1977, p. 14).

Resolution of the externality controversy is not part of this study. It is important to emphasize that the most efficient means of producing accounting information depends on the characteristics of that information. Currently, however, accounting information is provided under the auspices of a nonmarket mechanism. Therefore, an analysis of nonmarket social choice processes seems appropriate.

At a very fundamental level, the first problem in implementing nonmarket social choice processes is evaluating the societal milieu in which the choices are made. Quirk and Saposnik, welfare economists, describe the problem.



A primary objective of welfare economics is to provide a guide for distinguishing between "good" ("desirable") and "bad" ("undesirable") states of the economy. Because of the diversity of opinion, even among "reasonable" men, as to the meaning of these terms, the ultimate validity of much of welfare economics must remain a matter of personal opinion. In principle, one could conceive of a whole host of theories of welfare economics, based upon differing sets of value judgments concerning the manner in which the term "desirable" state of the economy or economic system should be defined (1968, p. 104).

Consequently, an assumption must be made as to the appropriate value judgments to be used in applying social choice processes. They continue:

In practice, essentially all of modern welfare economics is based upon one fundamental ethical postulate. To borrow Samuelson's phrase: In evaluating states of the economy, individual preferences are to count (1968, p. 104).

In other words, societal preferences must be a function of members of society. Samuelson draws on the "individualist philosophy of modern Western civilization" (1947, p. 223) to reach his conclusion. In a democratic society, then, it would be untenable to ignore individual preferences.

Samuelson assumes all individual preferences are to count in making societal decisions, regardless of the characteristics of those individual preferences. In a



society with diverse preferences, Arrow (1963) has shown that, given a fairly mild set of assumptions, a complete and transitive social ranking of alternatives does not exist. That is, no method exists for moving from individual preferences to societal preference that simultaneously meets Arrow's conditions. The severity of the aggregation problem, however, directly depends on the degree of preference diversity.

In accounting, the severity of the aggregation problem is not known because little is known about the degree of preference diversity. Serious consideration of the information economics approach by accounting theorists is also hindered by lack of information on individual preferences. One purpose of the dissertation is to determine the preference diversity among select input responses to the FASB.

### Summary

Research dealing with the process of setting standards is a new occurrence in financial accounting. An integral dimension to accounting theory is the process of setting standards. A universal theory of



financial accounting is currently lacking, however, with four competing approaches reviewed in this chapter. The descriptive research of this dissertation can best be couched in terms of one of the approaches, information economics; consequently, an expanded discussion of that approach is included in this chapter.

Discussion of the CAP and APB, predecessors to the FASB, was intended to provide a historical perspective to analyzing the current operations of the FASB. The chapter includes a review of FASB operations, and it appears that the FASB has taken on a significantly expanded role from that of its predecessors. Ostensibly, the FASB perceives itself as a democratic, social choice mechanism, with a large and diverse constituency base. The dissertation research provides the FASB with characteristics of a portion of its constituency base.



that performed in this dissertation. A final section summarizes the chapter.

## CHAPTER 3

### Data Base

#### METHODOLOGY

The data base can be summarized as follows. Of

the var This chapter delineates the methodological approach of the dissertation. The choice of methodological techniques is guided by the three general research questions included in Chapter 1 (page 3). It is possible other techniques are available for addressing the questions, and no claim is made concerning the optimality of the techniques. The conduciveness of the methodology chosen to the general research questions, however, is discussed throughout this chapter. is generated for each

project. There are five main sections of the chapter.

Initially, the data base, constituting a portion of the FASB public record, is discussed. Two statistical techniques are used to describe the data base. Discussion of these techniques, multidimensional scaling and discriminant analysis, represent, respectively, the second and third sections of the chapter. A fourth section surveys research that is methodologically and topically similar to

generated material (e.g., discussion memoranda, in-house



that performed in this dissertation. A final section summarizes the chapter.

### Data Base

The data base can be summarized as follows. Of the various topics considered by the Board since its inception, nine primary topics are selected for analysis. Within those topics, responses only to the discussion memoranda are examined in all but one case. Exposure draft responses are analyzed for one topic because no discussion memorandum was issued. The analysis is limited to the responses of all those respondents who provided comments on at least seven of the nine topics. Finally, a set of policy questions is generated for each project. The respondents' positions on the policy questions are extracted from their submissions to the Board, and form the data base for the statistical techniques. Justification for this data base is discussed in the following paragraphs.

The FASB generates an input base for each of its projects. The total base for a completed project, labeled the public record by the FASB, includes both internally generated material (e.g., discussion memoranda, in-house



research projects) and externally generated material (e.g., discussion memorandum responses, public hearing transcripts, and exposure draft responses). In most cases, the portion of the public record generated externally for each project is only available once a policy decision is made by the FASB. Some projects, from inception to completion, have gone on for years. The FASB generates a tremendous amount of public records for many projects, and the benefits of incorporating the complete data base in the research must be weighed against the time and cost involved in such a project.

The primary benefit of a descriptive analysis based on the FASB public record, in toto, would be its completeness. The feasibility of such an undertaking appears questionable, however, for at least two reasons. First, it is possible to view the FASB public record, for any particular project, as consisting of distinct, time-based, segments. For example, one phase of a project consists of generating responses to a discussion memorandum. Another distinct segment is represented by the project's public hearing transcript. The present research is concerned primarily with one stage of the due process procedures for select projects. Analysis of only



one stage of the process, however, is an arduous and extensive task as is detailed later in this chapter. Therefore, the feasibility of a complete public record analysis, while not an impossible task given the time and resources, is beyond the scope of a dissertation. Furthermore, the distinct, time-based, segments of each project's public record allows the researcher to isolate a portion of that public record for examination.

A second reason for analyzing only a subset of the input base relates to the completeness of the public record. Even though the FASB is committed to maintaining a complete public record, it is doubtful whether such a task is possible. Instances exist in which data in the public record acknowledge other items related to a project, but are not part of the public record. For example, the project culminating in SFAS Statement No. 10, "Extension of 'Grandfather' Provisions for Business Combinations," was initiated by Akzona Incorporated in a petition submitted to the Board in March 1975. The petition, although not a part of the public record, is acknowledged in Akzona's letter of comment to the FASB (FASB file reference 1033-017P, letter of comment no. 16, p. 2). In public record.



addition, Akzona made an oral presentation at the FASB headquarters in Stamford on August 26, 1975 (FASB file reference 1033-017P, letter of comment no. 16, p. 1).

Neither a transcript of that meeting, nor copies of documentation presented to the Board, are part of the public record.

As another example, SFAS Statement No. 11,

"Accounting for Contingencies-Transition Method," changed the transition method for implementing SFAS Statement No.

5, "Accounting for Contingencies." One of the initiators

of that project, The Coca-Cola Company, conveyed its thoughts to the FASB in a telephone call. Their subsequent letter of comment (FASB file reference 1006-022P,

letter of comment no. 7, p. 1) acknowledges the phone call, but a transcript of that conversation is not part of the public record. The point to make is that the completeness of the public record is not known. It is

reasonable to assume, however, that some informal dealings exist between the FASB and industry, industry representatives, public accounting spokesmen, SEC officials, etc.

The current research skirts the completeness issue by limiting the data base to an interesting segment of the public record.



Consequently, only a portion of the public record is used as the data base. As of November 1978, the FASB had issued twenty-three statements of financial accounting standards. The FASB procedures preceding issuance of a statement, however, were not the same for all the statements. Of the twenty-three statements, the following were subject to the full due process procedures:

SFAS No. 2, "Accounting for Research and Development Costs," October 1974,

SFAS No. 5, "Accounting for Contingencies," March 1975,

SFAS No. 8, "Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements," October 1975,

SFAS No. 13, "Accounting for Leases," November 1976,

SFAS No. 14, "Financial Reporting for Segments of a Business Enterprise," December 1976,

SFAS No. 15, "Accounting by Debtors and Creditors for Troubled Debt Restructurings," June 1977, and

SFAS No. 19, "Financial Accounting and Reporting by Oil and Gas Producing Companies," December 1977.

The major difference between the due process procedures of these seven statements and the other sixteen statements is issuance of a discussion memorandum for each of the seven projects. Complete due process procedures are applied to those projects the FASB describes as of major,



widespread importance in the business community. Therefore, a possible criterion for narrowing the public record is to select only those projects that were preceded by full due process procedures.

A second possible indication of project importance to the business community is volume of input data generated on each project. A hierarchical listing of statements by number of exposure draft responses (exposure draft responses are used because all standards were preceded by an exposure draft) reveals that six of the top seven statements are included in the discussion memorandum-based listing in the preceding paragraph. SFAS No. 12, "Accounting for Certain Marketable Securities," is in the top seven but was not preceded by a discussion memorandum. Also, SFAS No. 15 is thirteenth in volume of responses.

One additional topic was subject to the full due process procedures and generated a large volume of exposure draft input responses. On December 31, 1974, after issuance of a discussion memorandum and deliberations, the FASB issued a proposed statement entitled, "Financial Reporting in Units of General Purchasing Power." The



exposure draft received more input responses than any other exposure draft to date. In June 1976, the FASB announced that it would not issue a final statement on general purchasing power accounting. Effectively, the Board decided to terminate consideration of the topic as a separate agenda item.

The selected projects for analysis in this research, based on the criteria of complete due process procedures and magnitude of responses, are the seven discussion memorandum-based statements, SFAS No. 12, and general purchasing power accounting. This is a total of nine issues on which the FASB has made policy decisions since its inception in 1973. Pertinent information regarding the nine projects is included in Appendix A.

The second narrowing factor is limiting consideration to discussion memorandum responses. The primary benefit to analyzing discussion memorandum responses is the neutrality of the memorandum. Strategic preference actions, such as vote trading, ideally are not part of responses to a neutral document. According to the FASB Rules of Procedure,

A discussion memorandum generally sets forth the definition of a problem, the scope of a project,



and appropriate financial accounting and reporting issues; discusses research findings and relevant literature; and includes alternative solutions to the issues under consideration and the arguments and implications relative to each (1978, p. 12).

Unfortunately, a discussion memorandum was not issued for SFAS No. 12, "Accounting for Certain Marketable Securities." For that project, responses to the exposure draft are analyzed. In deciding on whether to include SFAS No. 12 as a project for analysis, the perceived importance of the project based on volume of input responses is considered a more significant factor than lack of discussion memorandum-based responses.

A subset of respondents is necessary for two reasons: (1) even after narrowing the projects to the nine bases discussed above, the volume of information is great; and (2) the statistical analyses adapt best to an input base that is the same for all projects. As discussed earlier, not all respondents (individuals, firms, representational organizations, etc.) comment on all projects. A review of the FASB public record reveals that: ten respondents commented on all nine projects; nineteen respondents commented on eight, or more, of the nine projects; twenty-seven respondents commented on seven, or



more, of the nine projects; and thirty-four respondents commented on six, or more, of the nine projects.

For reasons discussed below, those respondents who commented on seven, or more, of the nine projects constitute the subset of input responses analyzed. Table 1 is a list of those twenty-seven respondents. Appendices B and C provide detailed information on the respondents.

Ideally, the subset of responses would include only those respondents who commented on all nine projects. Unfortunately, only ten respondents meet that criterion. In deciding on criteria for establishing the upper boundary of allowable missing responses, two factors are considered. As stated in Chapter 1, one of the justifications of the research related to the Metcalf report (1976b). The report is specifically concerned with two segments of the business community: big eight public accounting firms, and sponsoring organizations of the FASB. A criterion of allowing two missing responses, or less, across all nine projects includes all members of those two groups. (See Appendices B & C, and Table 1)

The second factor for choosing the input responses is diversity of representation. This factor is



TABLE 1  
LIST OF RESPONDENTS

Respondent	Abbreviation
1. Arthur Andersen & Co.	AA&Co.
2. Arthur Young & Co.	AY&Co.
3. Coopers & Lybrand	C&L
4. Ernst & Ernst	E&E
5. Haskins & Sells	H&S
6. Price Waterhouse & Co.	PW&Co.
7. Peat, Marwick, Mitchell & Co.	PMM&Co.
8. Touche Ross & Co.	TR&Co.
9. American Accounting Association	AAA
10. American Institute of CPAs	AICPA
11. Financial Executives Institute	FEI
12. The Financial Analysts Federation	FAF
13. National Association of Accountants	NAA
14. Arizona Society of CPAs	ASCPA
15. District of Columbia Institute of CPAs	DCICPA
16. The New York State Society of CPAs	NYSCPA
17. National Electrical Manufacturers Association	NEMA
18. General Motors Corporation	GM
19. Shell Oil Company	Shell
20. American Cyanamid Co.	ACyanimid
21. E.I. duPont de Nemours & Co.	duPont
22. Aetna Life & Casualty Company	Aetna
23. General Electric Company	GE
24. Exxon Corporation	Exxon
25. Marcor Inc.	Marcor
26. W.R. Grace & Co.	WRGrace
27. John A. Grady	Grady



not independent of the first criterion in that a diversity of interests is represented by the big eight public accounting firms and, particularly, the sponsoring organizations. The criterion of allowing two missing responses, or less, across all nine projects provides a diversification of interests. Remember that the big eight firms and sponsoring organizations all meet that criterion. In addition, Table 1 lists the industry respondents and a governmental respondent that also meets the criterion.

The subset of input responses subject to analysis, therefore, is the twenty-seven respondents listed in Table 1.

To recap, the FASB projects chosen for analysis are listed in Appendix A. Within those projects, discussion memorandum responses, with one exception, are considered. Appendices B and C provide information on the subset of input responses analyzed for each project. A final narrowing factor relates to the data extracted.

For each project, a set of primary issues addressed by the FASB is generated. Primary issues are identified in the discussion memorandum issued in connection with eight of the nine projects. Consequently, those issues are

tions is generated, averaging between five and six



used to develop a list of policy questions subsequently answered by the FASB in its final policy decisions.

The list of policy questions developed for each project might differ from the primary issues listed in the discussion memorandum for at least two reasons: (1) some primary issues do not adapt to a policy question format, and (2) the FASB designates some issues as implementation issues. As to item (1), the methodology employed requires that the respondents' positions fit into one of three categories. Not all primary issues can be converted to policy questions and simultaneously meet this requirement. Regarding item (2), the implementation issues are refinements of primary issues that are considered in generating the list of policy questions. As stated earlier, SFAS No. 12, "Accounting for Certain Marketable Securities," was not preceded by a discussion memorandum. For that project, a list of policy questions is generated by reviewing the exposure draft issued prior to the statement.

Appendix D is a listing of the policy questions for the nine projects. A total of fifty-one policy questions is generated, averaging between five and six



questions for the projects. Many of these projects represent topics hotly debated by accountants for years. By reviewing authoritative pronouncements preceding each project (if they exist), the FASB public record for each project, and the financial accounting literature in general, the fundamental issues of each project are easily discernable. Even though the list of policy questions in Appendix D is not all-encompassing, the fundamental issues are addressed in one or more policy questions for every project.

Data extraction is based on the fifty-one policy questions. For each policy question, respondent's preferences are extracted from their input submissions to the Board. These submissions obviously are made before the FASB has made a final policy decision. Three positions are possible in response to the questions: (1) yes, (2) no, or (3) neutral or no response. Category (3) captures different, but related, situations. In some cases, respondents provide the FASB with a letter of comment, but either do not address all the issues, or do not take a position on all the issues. To those policy questions, the responses are categorized as position (3). In



addition, position (3) is used for missing data. If a respondent did not provide a letter of comment to the FASB on a particular project, the respondent is categorized as position (3) for all policy questions of that project. Appendix E details the positions of the twenty-seven respondents for the fifty-one policy questions. The FASB's positions on the questions are also included in the appendix. Their position is known because final policy decisions (statements, in most cases) have been made on all the projects in the data base. The use of the FASB data is explained in the next section of the chapter.

Table 2 provides a summary of the data base for the dissertation. This same base is used for the multi-dimensional scaling and discriminant techniques. The statistical procedures employed for analysis cannot overcome any inherent weaknesses in the data base. Hopefully, the data base is sufficiently defined so that the scrutinizing researcher can evaluate the benefits and limitations of the research. Some of the benefits and limitations of this study are addressed in Chapter 6.



Multidimensional Scaling (MDS)

MDS is used primarily to addressing the following two questions:

1. Are there systematic groupings or relationships of input preferences for accounting issues addressed by the respondents?
2. Are there systematic groupings or relationships of input preferences for accounting issues addressed by the respondents?

A general description of the data base used in this study is provided by a discussion of the data base used in this study. These data are included in the appendix to this report. The data are included in the appendix to this report. The data are included in the appendix to this report.

TABLE 2

DATA BASE FOR EMPIRICAL RESEARCH

<u>Projects:</u>	
Accounting for Research and Development Costs	
Accounting for Contingencies	
Accounting for Foreign Currency Transactions and Financial Statements	
Accounting for Certain Marketable Securities	
Financial Reporting in Units of General Purchasing Power	
Accounting for Leases	
Financial Reporting for Segments of a Business Enterprise	
Accounting by Debtors and Creditors for Troubled Debt Restructurings	
Financial Reporting by Oil and Gas Producing Companies	
<u>Response Source:</u>	
Discussion memorandum for all projects except accounting for certain market-able securities. Exposure draft responses are used for that project.	
<u>Respondents:</u>	
Twenty-seven individuals, firms, and representational organizations from these major categories:	
Sponsoring organizations of the FASB	
Big eight public accounting firms	
New York Stock Exchange industrial enterprises	
Industry and public accounting organizations other than sponsoring organiza-tions	
Government	
<u>Data Extraction:</u>	
Preference positions on fifty-one policy questions across the nine projects.	



### Multidimensional Scaling (MDS)

MDS is used primarily to addressing the following two questions:

1. Are there systematic groupings or relationships of input preferences for select accounting issues addressed by the FASB?
2. Are there changes in groupings or relationships of input preferences across select accounting issues addressed by the FASB?

A general description of MDS is presented first, followed by a discussion of its specific application to address these issues. The choice of an MDS algorithm is also included in this section.

MDS is a statistical technique used to describe relationships among objects. Shepard cites two purposes of MDS:

- (a) of somehow getting hold of whatever pattern or structure may otherwise lie hidden in a matrix of empirical data and (b) of representing that structure in a form that is much more accessible to the human eye--namely, as a geometrical model or picture (Shepard, Romney, and Nerlove, eds., 1972, p. 1).

In a very readable book, Kruskal and Wish describe MDS.

Multidimensional scaling refers to a class of techniques. These techniques use proximities among any kind of objects as input. A proximity is a number which indicates how similar or how different two objects are, or are perceived to be, or any measure of this kind. The chief output is a spatial representation, consisting of a geometric



configuration of points, as on a map. Each point in the configuration corresponds to one of the objects. This configuration reflects the "hidden structure" in the data, and often makes the data much easier to comprehend. By reflecting the data structure we mean that the larger the dissimilarity (or the smaller the similarity) between the two objects, as shown by their proximity value, the further apart they should be in the spatial map. We note that MDS is sometimes used indirectly to analyze data which are not proximities, by forming proximities as an intermediate step (1978, p. 7).

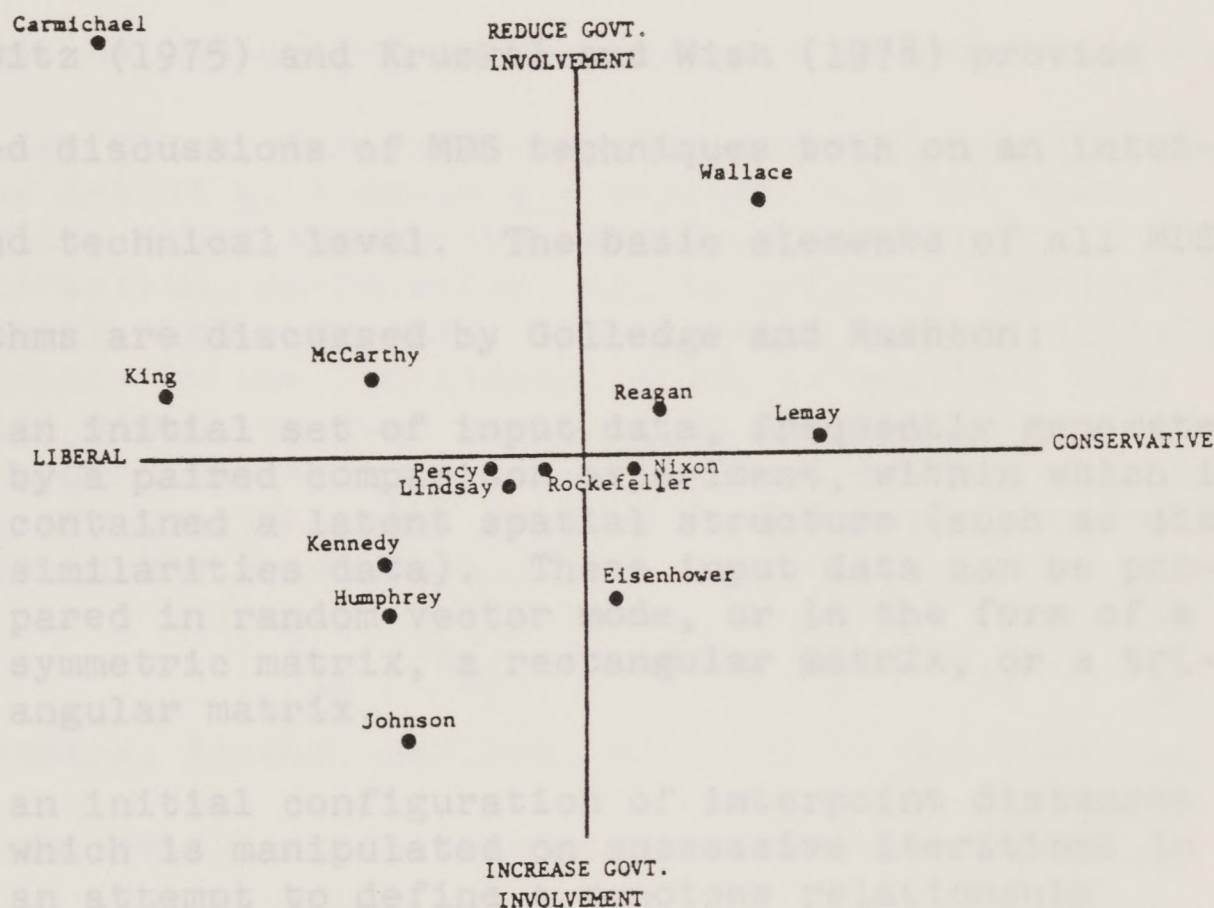
The purpose of MDS techniques, therefore, is to generate a spatial representation of objects. The output of an MDS algorithm, the spatial representation, is often referred to as the "object space." Figure 1 is an example of a two-dimensional map involving political figures. The map is generated by Golledge and Rushton, who include details of the data base in their book (1972, pp. 51-52). The MDS algorithm provides unique coordinates for each of the politicians based on nonmetric data. Axis labeling was performed by Golledge and Rushton by studying the object space in context of attributes of the politicians. Figure 1 is a good example of a typical object space. It also is intuitively "correct" if the viewer has the traditional perception of the politicians included in the representation. The last section of this chapter discusses the use of MDS in an accounting setting.



As implied in the Kruskal and Wish quoted above, the mainstay function of MDS algorithms is to convert proximities among objects to distances among objects. In other words, a conversion is made from proximities to a spatial representation based on interpoint distances.

FIGURE 1

## Example of Two-Dimensional MDS Map



SOURCE: Golledge and Rushton (1972, p. 52).

- c) a computing algorithm (a non-metric scaling algorithm) which is manipulated in successive iterations in an attempt to define a spatial relationship between the configuration and the original data.
- d) a loss function (or "goodness-of-fit") which is used to guide and/or terminate the iterative procedures.
- e) subroutines for handling missing data and for determining stop size within each generated configuration.



As implied in the Kruskal and Wish quoted material, the mainstay function of MDS algorithms is to convert proximities among objects to distances among objects. In other words, a conversion is made from proximities to a spatial representation based on interpoint distances. Rabinowitz (1975) and Kruskal and Wish (1978) provide detailed discussions of MDS techniques both on an intuitive and technical level. The basic elements of all MDS algorithms are discussed by Golledge and Rushton:

- a) an initial set of input data, frequently generated by a paired comparison experiment, within which is contained a latent spatial structure (such as dissimilarities data). These input data can be prepared in random vector mode, or in the form of a symmetric matrix, a rectangular matrix, or a triangular matrix.
- b) an initial configuration of interpoint distances which is manipulated on successive iterations in an attempt to define a monotone relationship between the configuration and the original data.
- c) a computing algorithm (a non-metric scaling method) which incorporates the strategy for achieving convergence of the data and the configuration.
- d) a loss function (or "goodness-of-fit") function which is used to guide and/or terminate the iterative procedures.
- e) subroutines for handling missing data and tied data, and for determining step size motions within each generated configuration.



f) techniques for estimating the configuration deformation as the number of dimensions in which the configuration is plotted is changed (1972, p. 7).

The most important elements in any MDS algorithm are techniques for performing items (b) and (d). For item (b), the key term is "monotone" relationship. Shepard explains the concept of monotonicity as follows.

We are given, for every two "objects" ( $i$  and  $j$ ) in some set of  $n$ , a datum  $s_{ij}$  representing the similarity, substitutability, affinity, association, interaction, co-relation, or, in general, "proximity" between them. We seek, simply, that configuration of  $n$  points in the (Euclidean) space of smallest possible dimension such that, to an acceptable degree of approximation, the resulting interpoint distances  $d_{ij}$  are monotonically related to the given proximity data in the sense that

$$d_{ij} < d_{kl} \quad \text{whenever} \quad s_{ij} > s_{kl}$$

(Shepard, Romney, Nerlove, eds., 1972, pp. 7-8).

A monotone relationship insures that the rank order of distances is identical with the rank order of the original measures, or proximities. Golledge and Rushton state: "A perfect monotonic relation would involve exactly the same ranking for corresponding pairs of dissimilarities (proximities) and configuration distances" (1972, p. 9).

The monotonicity element of MDS algorithms is important for another reason. The interpretation of object spaces can only be made in terms of relative



distances. The coordinate axes have no special significance other than to provide plotting references for the points on the configuration. In other words, contrary to some other plotting techniques in which the axes are fixed, only relative distances among points take on significance in MDS output. The axes are used for interpretive purposes only. Kruskal and Wish provide a discussion of the importance of point distances in context of rotating the axes.

The reason rotation is permissible is that the configuration is based on the distances between the points. These distances do not change when the configuration is rotated, so they contain no information whatsoever as to what rotational position is "correct" for the configuration. In fact, in typical MDS applications, there is no such thing as a correct rotational position for the configuration, although certain positions may be more pleasing aesthetically, or more useful for some purposes (1978, pp. 34-35).

Item (b), the essence of which is the monotonicity requirement, is closely related to item (d), the loss function. In defining monotonicity, Shepard states the relationship should be maintained at "an acceptable degree of approximation" (Shepard, Romney, Nerlove, eds., 1972, pp. 7-8). The loss function guides the degree of monotonicity violation that is allowed, and is used by



the researcher to evaluate the "quality" of the MDS output. Kruskal's Stress is one type of loss function, and is addressed in the discussion of interpreting MDS configurations.

The purpose of generating a spatial representation is to better understand the interrelationship among objects. This is potentially achieved by analyzing the object space. Rabinowitz states that the researcher must address three basic questions:

1. What is the correct dimensionality for the spatial representation of the data matrix?
2. How satisfactory a solution has been achieved? That is, what does any particular Stress value tell us about the solution?
3. How can the spatial configuration recovered be substantively interpreted? (1975, pp. 378-368).

As to questions (1) and (2), Shepard states:

In most cases one seeks a representation of the lowest possible dimensionality consistent with the data. Clearly, a lower-dimensional representation is more parsimonious in that it represents the same data by means of a smaller number of numerical parameters (the spatial coordinates of the points). Moreover, to the extent that fewer parameters are estimated from the same data, each is generally based upon a larger subset of the data and, so, will have greater statistical reliability. Finally, and perhaps most significantly, a picture or model is much more accessible to human visualization if it is confined to two, or, at most, three spatial dimensions (Shepard, Romney, Nerlove, eds., 1972, p. 2).



There is an obvious visual advantage to limiting the representation to two dimensions, as is intimated by Shepard.

Kruskal's Stress (1964) has been widely used as a measure of appropriate dimensionality, and is reported by many MDS algorithms. Stress can be defined as the degree of monotonicity between proximities and distances (Kruskal, 1964, p. 3). A Stress value is reported for each dimensionality solution. A perfect monotonic relationship results in a Stress value of zero, with high Stress values connoting poor monotonic relationships. As stated earlier, the Stress value of Kruskal represents one type of loss function, or a goodness-of-fit function. Because of the inverse nature between Stress values and monotonicity (i.e., the higher the Stress, the poorer the monotonicity), the MDS literature often refers to Stress as a "badness-of-fit" function.

Kruskal (1964, p. 3) and Rabinowitz (1975, p. 50) have developed guidelines for determining the appropriate number of dimensions for interpretation. Both Rabinowitz (1975, p. 50) and Rockness and Nikolai (1977, p. 157), however, suggest cautious use of the guidelines. The



Stress values are sensitive to the number of points, or objects, with Stress increasing with increasing points.

Along these same lines, Green states:

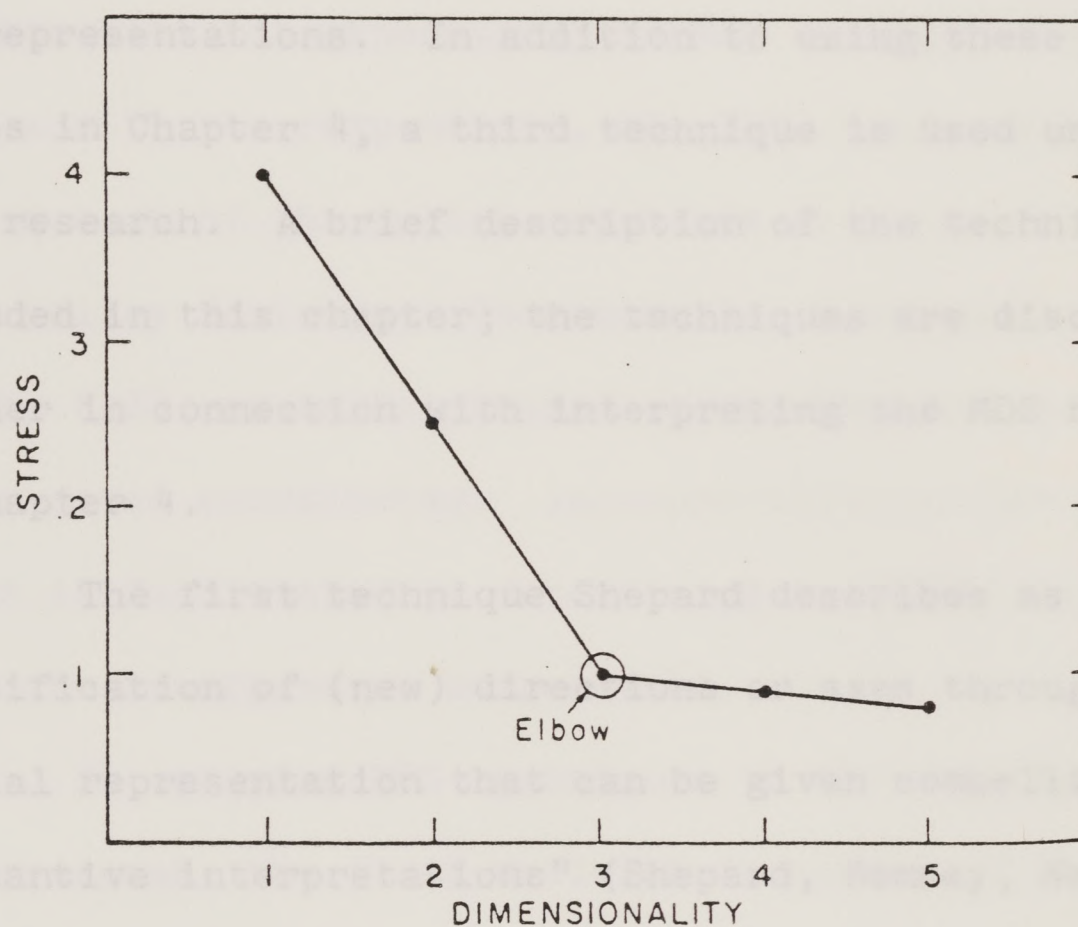
Early (and, often, almost blind) reliance on statistical fit measures like Kruskal's stress as an indication of "correct" dimensionality has given way to the use of more sensible criteria such as replicability of results and interpretability of the solution (p. 26).

Kruskal (1964, p. 17), Golledge and Rushton (1972, p. 14), and Rabinowitz (1975, p. 369) suggest an additional aid to Stress values for determining the appropriate dimensionality. First, the MDS analysis is run in several dimensions, resulting in a Stress value for each dimensionality. The Stress values are then plotted against the dimensionality. Figure 2 provides an example of stress-dimensionality plotting. Generally, a noticeable elbow will occur in the curve that indicates the appropriate number of dimensions. The rate of decrease in Stress past the elbow is slight, as in Figure 2, and indicates that little is gained by interpreting higher dimensional maps. In this study, the stress-dimensionality plotting and the Stress values are jointly considered in choosing the appropriate number of dimensions for interpretation.



FIGURE 2

Example of Stress-Dimensionality Plotting



SOURCE: Rabinowitz (1975, p. 368).



Once the dimensionality is chosen, Rabinowitz's question (3) - How can the spatial configuration recovered be substantively interpreted? - must be addressed. Two general techniques are used to evaluate MDS representations. In addition to using these two techniques in Chapter 4, a third technique is used unique to this research. A brief description of the techniques is included in this chapter; the techniques are discussed further in connection with interpreting the MDS results in Chapter 4.

The first technique Shepard describes as "the identification of (new) directions or axes through the spatial representation that can be given compelling substantive interpretations" (Shepard, Romney, Newlove, 1972, p. 4). The technique involves attempting to label axes based on significant properties or characteristics of the objects in the configuration. The second technique involves identifying clusters of objects in the configuration. If one or more clusters of objects exist, characteristics of the objects in the cluster are evaluated for potentially labeling the cluster. A cluster analysis routine based on Euclidean distance measures



between objects (Brown, ed., BMDP2M, 1977) is used to identify the clusters. The third technique is determining the FASB unique location among the objects (respondents) in the configuration. Appendix E constitutes the raw data base for generating the MDS configurations. Just as with the respondents, the FASB preference position on each of the policy questions is known from its final policy decision. Consequently, a unique coordinate for the FASB can be determined along with the other twenty-seven coordinates. Interpretation of the MDS output is facilitated by determining the FASB's position among the twenty-seven respondents.

In applying MDS techniques to the data base of this research, the first decision is choice of an appropriate algorithm. A wide variety of algorithms exist. The development of algorithms appears to be cumulative, with each new algorithm more flexible and/or rapid than the previous algorithms.

ALSCAL, an acronym for Alternating Least-square Scaling, is used to generate the spatial configurations in Chapter 4. ALSCAL is chosen for two reason: (1) it is a flexible and comprehensive algorithm, and (2) it is



accessible to the researcher. ALSCAL was developed by Young, Takane, and deLeeuw in 1974. In a more recent article, they conclude: "ALSCAL obtains the same structure as that obtained by other algorithms in those special cases for which algorithms have been previously developed" (1977, p. 63). They further conclude that "ALSCAL is flexible with regard to the data since essentially all of the commonly discussed types of data (and some types not previously discussed) fall within ALSCAL's province" (1977, p. 63). Also regarding the flexibility of ALSCAL, Kruskal and Wish describe it as a generalized version of INDSCAL, an algorithm which they believe to be very powerful (1978, p. 83). ALSCAL represents a relatively new algorithm, and it appears that Young, Takane, and deLeeuw have drawn on previous work to develop a well-received algorithm.

The University of Texas computation center obtained the ALSCAL algorithm from the L.L. Thurstone Psychometric Laboratory (University of North Carolina) in 1976). The algorithm was requested and first used by faculty in educational psychology at The University of Texas at Austin. Since the initial development of ALSCAL,



Young, along with Lewyckyj (1979), have slightly revised the algorithm. The revised version is not available at The University of Texas at Austin. Through personal communication with Young, however, it was determined that no substantive differences exist between the two versions. The main differences related to speed of computations, quantity of data allowed, and interpretive reporting options. ALSCAL, therefore, is employed in the dissertation. ALSCAL was also used in similar research, as reported in the last section of this chapter.

The next stage in applying MDS involves data preparation. In most cases, input data need some form of preprocessing (Kruskal and Wish, 1978, p. 73). The preprocessing decisions and the research questions are interrelated, however. The MDS techniques are used primarily to address the two research questions listed in the beginning of this section. These questions are general in nature. The interpretive procedures for MDS results represent the techniques available for answering these questions, once an appropriate data base is determined. Various data bases are used to address these questions.



Recall that Appendix E includes the raw data input for MDS. From that raw data base, twelve different data bases, and consequently twelve different MDS spatial configurations, are generated. In Chapter 4, the twelve MDS configurations are evaluated individually and jointly to address the two general research questions. The following paragraphs details the preprocessing, or conversions, of the raw data.

The data in Appendix E must be converted to proximities, or distances, data among objects to qualify for MDS-type input. For each policy question, pair-wise comparisons are made between each respondent and every other respondent. Pair-wise comparisons are also made between the FASB's positions and the respondents. With three preference options available (yes, no, neutral or no response), a comparison yields nine possible combinations. Ordinal numbers are assigned to each of the nine combinations, as illustrated in Table 3.

The first step in the data preprocessing, therefore, is generating fifty-one pair-wise comparison matrices, one for each of the policy questions. Appendix F includes the matrices. Notice that only the lower



TABLE 3

## PAIR-WISE COMPARISON POSITIONS

	Yes	Neutral or No Response	No
Y E S	Very Similar (1)	Intermediate (5)	Very Dissimilar (9)
N E U T R A L	Intermediate (5)	Very Similar (1)	Intermediate (5)
N O	Very Dissimilar (9)	Intermediate (5)	Very Similar (1)



half of the matrices are included in the appendix. Because the matrices are symmetrical, the upper half and lower half are identical. Each matrix represents the degree of similarity among the twenty-seven respondents and the FASB, on the particular policy question.

The next step in the preprocessing is collapsing the fifty-one matrices into twelve different input bases. Appendix G includes the twelve input bases, and the titles given each base. Table 4 lists the matrices combined to generate the twelve different input bases in that appendix.

The root-mean-square transformation is used in collapsing the matrices. Rockness and Nikolai (1977, p. 156) used the root-mean-square transformation in conducting similar research, and Young, through personal communications, also suggested use of the transformation.

The rationale for the twelve input bases is straightforward, with the exception of the eleventh and twelfth bases. The first nine bases represent the nine projects of the FASB selected in the data base of the dissertation. The tenth base is a composite base of all nine issues. The resulting ten MDS configurations,



included and interpreted in Chapter 4, allow for both individual project analysis and composite analysis. In addition, a time dimension can be achieved by interpreting

TABLE 4  
BASES FOR MDS MATRICES

Matrix	Policy Questions	Title
1	1- 4	Research and Development Costs
2	5- 9	Contingencies
3	10-17	Foreign Currency Transactions and Statements
4	18-21	Marketable Securities
5	22-28	General Purchasing Power Accounting
6	29-36	Leases
7	37-42	Segmental Reporting
8	43-47	Restructured Debt Accounting
9	48-51	Extractive Industry Accounting
10	1-51	Composite
11	1-21	Pre-1/1/76 Composite
12	22-51	Post-1/1/76 Composite

SPAS No. 13, "Accounting for Leases,"

SPAS No. 14, "Financial Reporting for Segments of a Business Enterprise,"



included and interpreted in Chapter 4, allow for both individual project analysis and composite analysis. In addition, a time dimension can be achieved by interpreting across configurations.

The eleventh and twelfth bases are built on environmental factors, explained in Chapter 4. Briefly, those factors are the result of increased activity of the public sector in accounting standards-setting. The two bases represent two time periods. The first MDS graphic representation is based on the following projects:

SFAS No. 2, "Accounting for Research and Development Costs,"

SFAS No. 5, "Accounting for Contingencies,"

SFAS No. 8, "Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements," and

SFAS No. 12, "Accounting for Certain Marketable Securities."

The second MDS representation is based on the remaining projects:

Financial Reporting in Units of General Purchasing Power,

SFAS No. 13, "Accounting for Leases,"

SFAS No. 14, "Financial Reporting for Segments of a Business Enterprise,"



SFAS No. 15, "Accounting by Debtors and Creditors for Troubled Debt Restructurings,"

SFAS No. 19, "Financial Accounting and Reporting by Oil and Gas Producing Companies."

Possible answers to the first two research questions are provided through analyses of the MDS representations. The twelve representations allow grouping and relational analyses among respondents both at distinct points in time, and over time. An additional analysis technique is built in the input bases that is not directly related to the research questions. All twelve matrices include pair-wise comparisons between the FASB and the twenty-seven respondents. The MDS configurations, therefore, include a unique position for the FASB among the respondents. The FASB's proximity to the twenty-seven respondents provides interesting insights on the Board's constituency alignment. The issue of constituency alignment, however, is best attacked with the discriminant analysis techniques. For that reason, the interpretation of the FASB position on MDS configurations is considered jointly with the discriminant analysis result. The discriminant analysis techniques are addressed next.



### Discriminant Analysis (DA)

DA is used to address the third general research question: The distinctness of that grouping scheme is then

3. Is there correlational evidence between particular input preferences and FASB policy decisions? Two a priori grouping schemes are tested. These Snedecor and Cochran define DA as "a multivariate technique for studying the extent to which different populations overlap one another or diverge from one another" (1967, p. 414). Eisenbeis and Avery delineate two objectives of DA.

The purposes of discriminant analysis are (1) to test for mean group differences and to describe the overlaps among groups and (2) to construct classification schemes based upon the set of  $m$  variables in order to assign previously unclassified observations to the appropriate groups (1972, p. 1).

DA can be used as both a predictive and descriptive statistical technique; in this research, it is used exclusively in a descriptive context. The technique facilitates explaining two characteristics of the raw data base represented by Appendix E: (1) distinctness of groups of respondents, and (2) FASB alignment with respondent groups. Eisenbeis and Avery discuss item (1) by stating that one use of DA can be "to describe groups rather than to predict group membership" (1972, p. 36).



In order to describe the distinctness of respondents groups, it is necessary to specify an a priori grouping scheme. The distinctness of that grouping scheme is then tested using DA procedures.

Two a priori grouping schemes are tested. These groups are hypothesized based on a review of current accounting literature and the respondents included in the data base. The groups are included in Table 5.

The attestor-preparer classification scheme includes twelve of the twenty-seven respondents in an attestor group comprising public accounting firms and their representational organizations. An additional twelve of the twenty-seven respondents are included in the preparer group comprising large industry and their representational organizations. Three respondents are not included in the attestor-preparer classification scheme. This scheme is based on the traditionally alleged, philosophical differences between industry and public accounting. The purpose of the DA procedures is to test whether these philosophical differences have resulted in distinct groups in the data base.



TABLE 5

A PRIORI GROUPING SCHEMES

## Classification Scheme 1-

Group A: Attestors  
 Respondents: 1-8, 10, 14-16

Group B: Preparers  
 Respondents: 11, 13, 17-26

## Classification Scheme 2-

Group A': Big eight public accounting firms  
 and the AICPA  
 Respondents: 1-8, 10

Group B': Sponsoring organizations other than  
 the AICPA  
 Respondents: 9, 11-13

Group C': Industry  
 Respondents: 17-26



A second classification scheme is directly related to the Metcalf report (1976b). Table 5 includes the groups in the scheme. Twenty-three respondents are part of the scheme. The staff preparing the Metcalf report accused the FASB of being unduly influenced by certain groups. Specifically, the big eight public accounting firms and the AICPA were accused of influencing the FASB through "monies, personnel, and organizational support" (1976b, p. 153). They stated:

The AICPA and the "Big Eight" accounting firms are the most important and influential supporters of the FASB. They were the major force in creating the FASB, and carefully organized its structure so that they would be able to control its operation (1976b, p. 157).

As to the other sponsoring organizations, they stated:

The other private sponsors of the FASB play a more limited role than the AICPA in the operation of the FASB, but their participation as sponsors is important. It gives the FASB an appearance of broad private sector support, while simultaneously removing four influential private groups from the ranks of potential FASB critics (1976b, p. 158).

The staff was not concerned with, and did not comment on, the potential influence of the third group in this classification scheme, industry.

The purpose of using the second classification scheme with DA procedures is twofold. First, the DA



procedures provide a forum for testing the legitimacy of the staff grouping schemes. In other words, the distinctness of the groups is tested using DA procedures. Second, the procedures generate empirical evidence to support or refute the conclusions of the Metcalf report.

The two a priori grouping schemes are independent. That is, the DA procedures are applied to the data base separately for each grouping scheme. Furthermore, the DA process is separately performed on all nine projects. The details of the procedures follow, but Figure 3 provides an outline of the DA output.

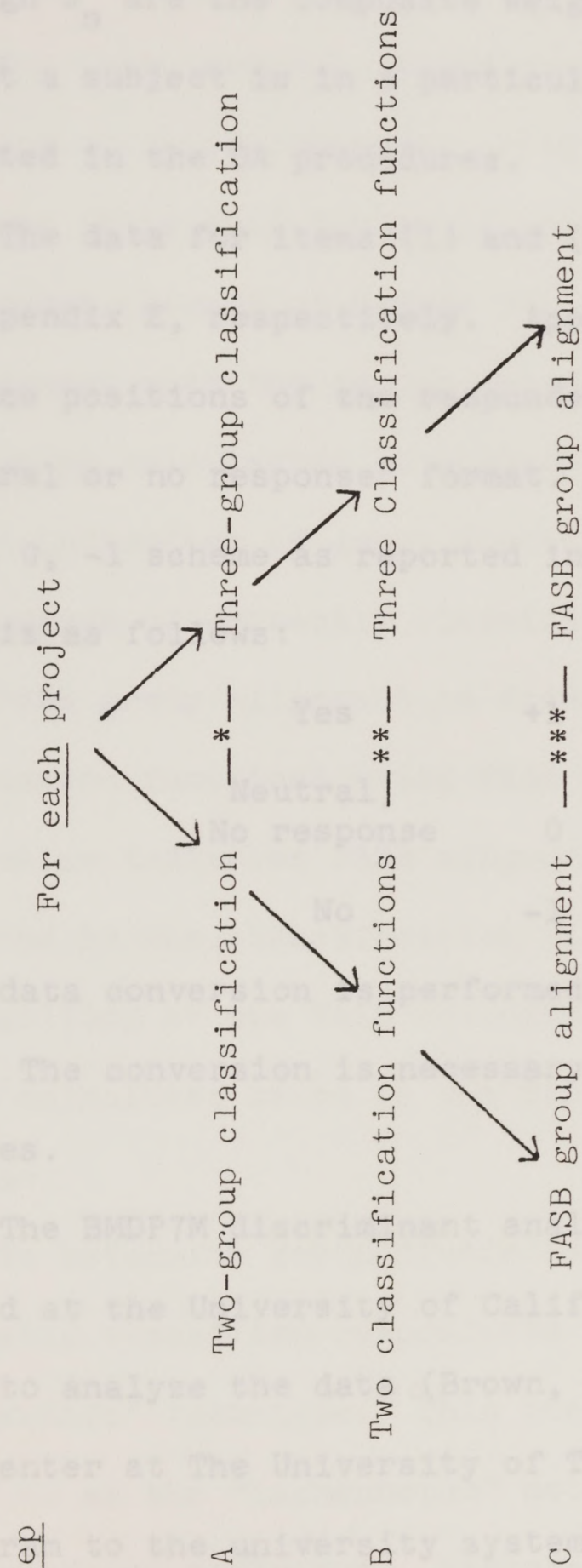
The results of applying DA to a set of variables, or data, are classification functions. Classification functions can be generated for each observation group. The functions constitute composite weighting schemes that maximize differences between the groups based on the variables in the function. For each project, the functions are generated from the following data for each respondent: (1) observation group membership, and (2) preference position on each policy question. The format of the functions are:

$$Y = f (b_1 X_1 + b_2 X_2 \dots b_n X_n)$$



FIGURE 3

## DA Output Steps



\*See Table 5 for classification schemes.

\*\*DA used to test distinctness of groups at this stage.

\*\*\*DA likelihood statistics used for testing degree of FASB alignment at this stage.



where  $X_1$  through  $X_n$  represent the policy questions, and  $b_1$  through  $b_n$  are the composite weights.  $Y$  is the likelihood that a subject is in a particular observation group represented in the DA procedures.

The data for items (1) and (2) above are in Table 5 and Appendix E, respectively. Appendix E includes the preference positions of the respondents in "yes," "no," or "neutral or no response" format. The data is converted to a +1, 0, -1 scheme as reported in Appendix H. The conversion is as follows:

Yes	+1
Neutral, No response	0
No	-1

Similar data conversion is performed by Heyck and Klecka (1973). The conversion is necessary to perform the DA procedures.

The BMDP7M discriminant analysis program, developed at the University of California at Los Angeles, is used to analyze the data (Brown, ed. 1977). The computation center at The University of Texas at Austin adapted the program to the university system in 1976. The BMDP7M program is used because of its (1) accessibility to the



researcher, and (2) techniques for evaluating classification errors.

For this research, three reporting features of the program are of major interest. First, given a classification scheme (Step A of Figure 3), classification functions are generated (Step B of Figure 3). Second, the degree of FASB alignment with the groups (Step C of Figure 3) is determined by calculating likelihood statistics. And third, an indication of group distinctness is reported via the percentage of correctly classified respondents.

FASB group alignment is determined by solving the classification functions using FASB variable values. The largest value indicates FASB alignment with the group represented by the classification function. In addition, the probability of the FASB belonging to a particular group is calculated based on the FASB's distance from the group mean.

To determine group distinctness, the percentage of correctly classified respondents is calculated using the "jackknife" technique. This technique is also referred to as the "Lachenbruch" method, named after the developer of the technique. Eisenbeis and Avery describe the method:



(1972) Basically, the method requires the calculation of . . . different classification rules holding out a different observation each time. The observation which is held out is then reclassified. The proportions of misclassified observations from each group are used as estimates of the conditional probabilities of misclassification (1972, p. 23).

As indicated in Figure 3, the procedures described above are repeated for each project. The degree of correlation between FASB decisions and observation groups is determined by the FASB's frequency of membership in groups across projects. For example, if under the three-group classification scheme the FASB falls into Group A for all nine projects, then a high correlation exists between that observation group and FASB policy decisions. No a priori standards for "high" or "low" correlation are established, however, because of the descriptive nature of the research.

#### Research Using Similar Methodology

An extensive literature review is not included in Chapter 2, or in this section, because of the scarcity of accounting policy-setting research. Several articles are reviewed, however, that report findings interesting to this research and/or are methodologically similar.

MDS has been used very little as a methodological tool by accountants. Research by Rockness and Nikolai



(1977), Pearson et al. (1979), and Libby (1979) constitute the extent of published work in the accounting literature. The first two are both methodologically and topically similar to this research. Libby uses MDS to investigate the perceptions of auditors and users regarding different types of audit reports.

Rockness and Nikolai employed MDS to review the voting patterns of the Accounting Principles Board (APB). From the thirty-one APB opinions, they extracted data as to voting patterns of fifty APB members. The vote of each member--either assent, assent with qualification, or dissent--was compared to each other member to generate pair-wise comparison positions. With three vote options when comparing each member to each other member, nine different combinations were possible. Ordinal numbers were applied to each of these combinations, and represented the source data for the MDS program.

Rockness and Nikolai used ALSCAL to generate four MDS graphic representations subject to analysis. Three of the configurations were two dimensional, and one of the configurations was three dimensional.



The following conclusions were made by Rockness and Nikolai after analyzing the MDS output.

First, there was little evidence of voting patterns associated with employment group membership. The only group of APB members who are consistent outliers across the life of the Board were the academic and perhaps the representatives of Arthur Andersen and Company. Second, there were strong systematic changes in the APB's voting patterns over time, associated with an apparently strong central voting block on early issues, divided groups in the middle stages of the APB's life, and relatively unsystematic voting patterns in the last stages. Finally, there is evidence of a conceptual-pragmatic dimension, indicating certain groups or individuals approached the accounting policy formulation from opposite ends of the spectrum (1977, p. 167).

They suggested similar research performed with FASB input can be compared to their results to estimate the success of the current policy-setting arrangement.

The work by Pearson et al., was methodologically very similar to that of Rockness and Nikolai. The principal difference was use of voting patterns of Auditing Standards Executive Committee (AudSEC) members. The voting patterns were taken from nineteen Statements of Auditing Standards (SAS). All other methodological techniques employed by Pearson et al., were the same as the techniques described above for the Rockness and Nikolai research.



previous Pearson et al., produced one MDS configuration in two dimensions. They concluded:

We uncovered no evidence to suggest that the Big Eight public accounting firms vote as a bloc. To the contrary, Big Eight firms are somewhat dispersed throughout both dimensions. Five of these large firms tend toward the far right of Dimension 1, but the largest firm, Peat, Marwick, is situated on the left. No clear-cut pattern appears in Dimension 2 (1979, pp. 130 and 132).

Their results imply a refutation of the Metcalf conclusions regarding the big eight public accounting firms. It is hard to imagine that the big eight public accounting firms unduly influence auditing standard-setting when they don't even operate as a voting bloc. Pearson et al., emphasize a caveat to their conclusions: distinct methodological limitations exist. These mainly relate to a base of only nineteen SASs.

The research of Rockness and Nikolai, and Pearson et al., provides some building blocks for the analysis of MDS output in Chapter 4. It is particularly beneficial because of the methodological similarities. The major difference between the current MDS work and the previous work is the data base. The current work primarily uses responses to FASB discussion memoranda, whereas the



previous work uses votes of Board members (either APB or AudSEC).

DA is used in accounting to address a number of different issues. As examples, Beaver (1967 and 1968) and Deakin (1972) used DA to predict bankruptcy of firms. Boatsman (1974) used DA to describe the method materiality judgments are made by a sample of individuals. Unfortunately, DA procedures have not been used in accounting policy research. It has been used for policy analysis, however, in other disciplines.

One example of DA use in policy research is provided by Heyck and Klecka (1973). While their findings are unimportant to this research, the methodological techniques are similar. They analyze role call votes of the British Parliament during the period 1874-1895. The Liberal party during that period consisted of two factions: Radicals and non-Radicals. The factional affiliation of only about half of the Liberal members is known from historical records. DA is used to classify the other half, or unknown affiliates, of the Liberal party members. The variables in the classification function are certain



policy issues to which the position of all Liberal members are known through roll call records.

In the current research, both a two-group and three-group classification scheme is employed. The analogous situation with the Heyck and Klecka research is the known Radical and known non-Radical classifications. In contrast to the case where half the Parliament's group membership was unknown, only one subject's group alignment is unknown and of interest in the current research. That subject is the FASB.

#### Summary

This chapter delineates the methodology of the dissertation. The data base, described in the first section, is a portion of the FASB public record for its completed projects. Nine projects are chosen for analysis. Within the nine projects, select letters of comment to the FASB by twenty-seven respondents are reviewed. The respondents' preference positions on fifty-one policy questions are extracted from the letters of comment.

MDS and DA are used to describe salient characteristics of the data base. Those techniques are described in detail in the second and third section of the chapter.



Specifically, MDS is used to describe any relationships, including groupings, among the twenty-seven respondents. MDS output is also generated to evaluate any changes in the relationships across projects. A unique feature to the MDS output includes the positional alignment of the FASB among the respondents.

DA is used to describe the distinctness of certain groups within the twenty-seven respondents. Two grouping schemes are evaluated, as reported in Table 7. In addition, DA is used to determine the degree of correlational alignment between the groups and the FASB final policy decisions.

A final section of the chapter reviews research topically and methodologically similar to the research in the dissertation. Relatively little research has been performed in the area of accounting policy-setting.

Articles by Rockness and Nikolai, Pearson et al., and Heyck and Klecka are reviewed in the section.



reported in Chapter 3, and then summarized in the summary of Chapter 3.

## CHAPTER 4

### MULTIDIMENSIONAL SCALING RESULTS

The multidimensional scaling (MDS) maps, generated from the input matrices included in Appendix G (Matrices 1-12), are presented and interpreted in this chapter. The following two research questions guide the analysis of the MDS maps:

(1) Are there systematic groupings or relationships of input preferences for select accounting issues addressed by the FASB?

(2) Are there changes in groupings or relationships of input preferences across select accounting issues addressed by the FASB?

Even though MDS and discriminant analysis are used to address different research questions, they partially act as complimentary techniques in this research. The results of each technique are first reported separately (discriminant analysis results are (1) labeling of axes, (2) clustering of respondents, and (3) positioning of the FASB among respondents. In



reported in Chapter 5), and then compared at the end of Chapter 5.

There are four sections of this chapter. The first section is an analysis of the composite MDS output (Matrix 10). As explained in Chapter 3, the composite MDS map is generated from the complete data base of the dissertation; that is, all fifty-one questions across the nine projects enter into the composite data base. The second section is an analysis and comparison of the pre-1/1/76 composite output (Matrix 11) and post-1/1/76 composite output (Matrix 12). The bases for these two composite maps are explained in this chapter. The nine remaining representational maps (Matrices 1-9) are discussed in the third section. A final section provides an overall analysis of the MDS findings.

As detailed in Chapter 3, interpretation of MDS results does not include the traditional evaluative techniques of significance tests, F-tests, etc. Three techniques are used to evaluate all of the MDS maps: (1) labeling of axes, (2) clustering of respondents, and (3) positioning of the FASB among respondents. In



addition, interpretation of the MDS results is aided by pertinent information about the respondents, included in Appendix B.

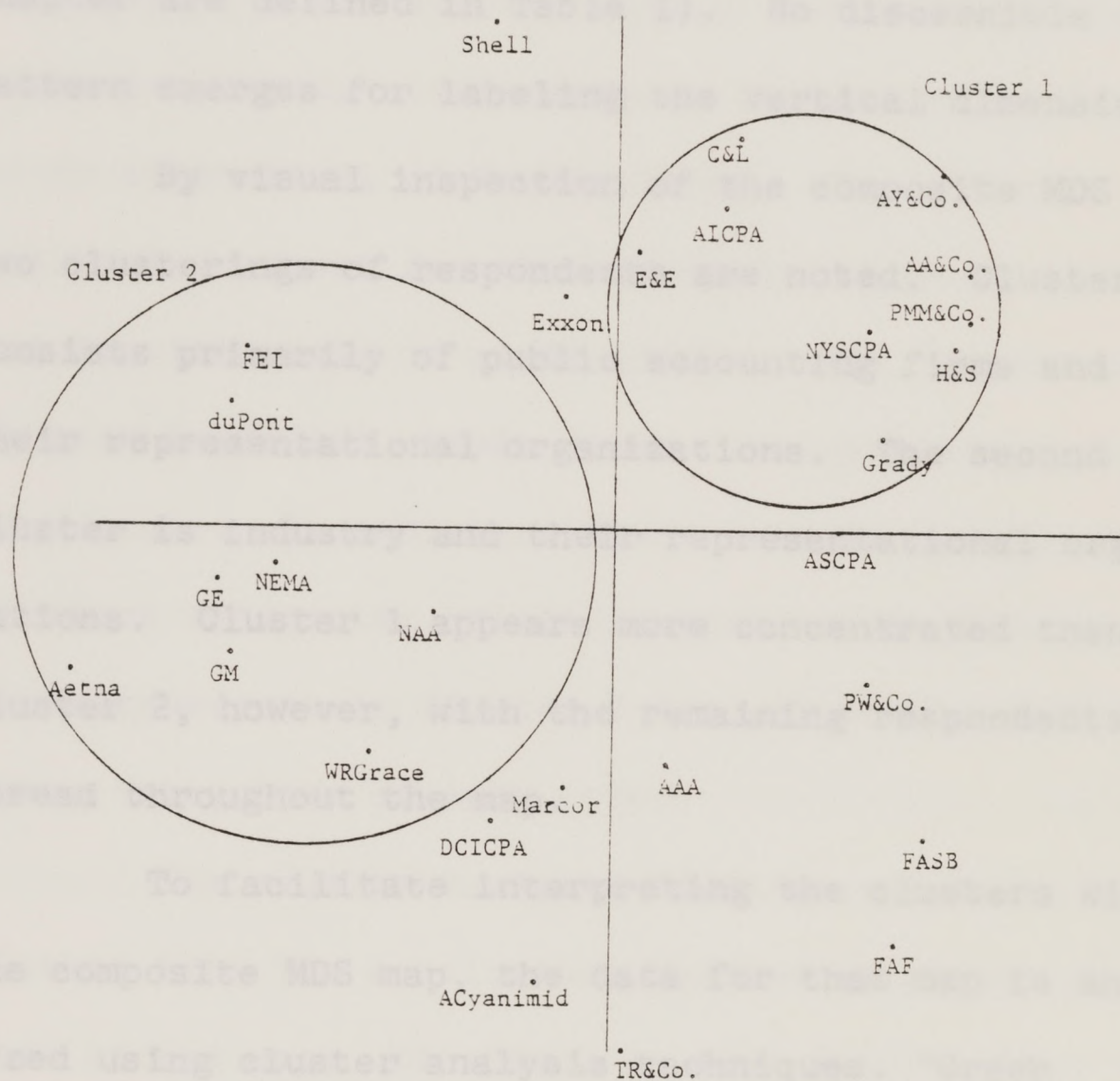
#### Composite MDS Results

The composite MDS map is interpreted in two-dimensional space. The stress values for up to four-dimensional maps are included in Appendix I. The stress values for the composite maps (.4903, .2652, .1900, and .1299) are plotted as exemplified in Figure 2. In plotting those values, the most prominent elbow occurs at the two-dimensional point. Additionally, the three- and four-dimensional maps do not reveal any underlying structure in the data that is not present in the two-dimensional map.

The composite map is included in Figure 4. The horizontal axis represents a fairly distinct occupational dimension with respect to financial statements. Moving from left to right, a preparer/attestor dimension emerges with industry and their representational organizations constituting preparers of financial statements, and public accounting firms and their representational organizations constituting attestors



FIGURE 4  
Composite MDS Map



See Table 1 for abbreviations used for respondents.



to financial statements. The DCICPA is an exception to this axis labeling, with both E&E and TR&Co. borderline respondents in the attestor quadrants. (The abbreviations used for the respondents throughout this chapter are defined in Table 1). No discernible pattern emerges for labeling the vertical dimension.

By visual inspection of the composite MDS map, two clusterings of respondents are noted. Cluster 1 consists primarily of public accounting firms and their representational organizations. The second cluster is industry and their representational organizations. Cluster 1 appears more concentrated than Cluster 2, however, with the remaining respondents spread throughout the map.

To facilitate interpreting the clusters within the composite MDS map, the data for that map is analyzed using cluster analysis techniques. Green suggests the use of cluster analysis as a complimentary technique to MDS (1975, p. 26). The cluster analysis data base is the respondents' preference positions on the fifty-one policy questions (Appendix E). The preference positions are converted to a +1, 0, and -1



scheme as discussed in the discriminant analysis methodology section.

The results of the cluster analysis routine, discussed in Chapter 3, also indicates the existence of Clusters 1 and 2. The routine reports distances among the twenty-seven respondents and the FASB based on an eight-level distance scheme. The distance intervals, except for the upper and lower categories, are approximately of equal length. The respondents in Cluster 1 are all within three distance categories of each other. In addition, Exxon is also within three distance categories of all respondents in Cluster 1. The respondents in Cluster 2 are all within four distance categories of each other.

The cluster analysis findings appear to be consistent with the conclusions reached by visual observation of the map. Cluster 1 is more concentrated than Cluster 2 based on distance dispersion among the cluster members. The cluster analysis results do not reveal any other distinct clusters of respondents.

Regarding Cluster 1, six of the big eight public accounting firms are included in the cluster.



The remaining members of the cluster, with the exception of Grady, are public accounting representational organizations. Across all nine projects, therefore, a moderate degree of preference homogeneity exists among the big eight public accounting firms. Since the committee of the AICPA responsible for submissions to the FASB is comprised primarily of big eight public accounting firm partners, it is not surprising that the AICPA is also a member of Cluster 1.

As stated above, Cluster 2 is less concentrated than Cluster 1. In addition, the cluster does not include five industry respondents who could be labeled preparers of financial statements. It appears, therefore, that the homogeneity of industry preferences is not as strong as that of the attestor respondents. The closest respondent to the FASB is the AICPA.

Both the composite MDS map and the cluster analysis indicate no homogeneous preferences among the sponsoring organizations of the FASB. In fact, the diversity is pronounced by the organizations spread throughout the four quadrants. The two sponsoring organizations with industry constituencies (FEI and



NAA) are both members of Cluster 2, representing preparers of financial statements. Analogous to the AICPA/big eight accounting firm relationships, both the NAA and FEI committees responsible for reporting to the FASB primarily consist of high corporate officials. It appears reasonable, therefore, for the organizations to align with the corporate respondents.

A final observation regarding the MDS composite map concerns the FASB's position among the respondents. On the horizontal preparer/attestor axis, the FASB is embedded in the attestor half of the map. It is not a member of Cluster 1, however, which constitutes the majority of the attestor affiliations. The FASB can be labeled an outlier in that it is removed from both Cluster 1 and Cluster 2.

The closest respondent to the FASB is the FAF. Remember that the composite map is generated from pair-wise comparisons among the respondents and the FASB, across all fifty-one policy questions. The possible pair-wise comparison positions are reported in Table 3, and consist of three categories: (1) very similar, (2) intermediate, and (3) very dissimilar. A review of



Appendix E, preference positions, indicates that the FAF and FASB are "very similar" on thirty-three of the questions, and "very dissimilar" on only six of the questions. For twelve of the issues the FAF and FASB comparisons are in the "intermediate" category. Only one other respondent, PMM&Co., is "very similar" with the FASB on more issues than the FAF (34 vs. 33). PMM&Co., however, is "very dissimilar" on sixteen issues. The number of FAF "very dissimilar" agreements with the FASB is the lowest for all the respondents. The basis for the pre-1/1/76 comparison was the

As described in Appendix B, the FAF is an organization of security and financial analysts. Ostensibly, the preference positions of the FAF are representative of an important set of financial statement users, that is, sophisticated financial statement analysts. Given the FASB's continuing emphasis on providing information useful to investors and creditors, culminating in Statement of Financial Accounting Concepts No. 1, it is interesting to note the proximity of the FAF and FASB. As with all the respondents constituting representational organizations, it is



difficult to assess the particular constituency base actually represented by the organizations.

The MDS configurations presented and interpreted in the next two sections of the chapter are based on subsets of the data base for the composite map. The final section provides further analysis of the composite MDS results in light of the MDS results based on subsets of the data.

#### Pre-1/1/76 and Post-1/1/76 Composite Results

The basis for the pre-1/1/76 composite map is projects 1-4, as listed in Appendix A. The basis for the post-1/1/76 composite map is projects 5-9. The projects are broken into two groups based on the announcement date of the policy decision. The first four statements were issued in 1975 or before, and the last five decisions were made in 1976 or later. Beginning in early 1976 and continuing to the present, the accounting profession has experienced significant environmental changes. Some examples of those changes are discussed below.



The operating environment of the accounting profession, and the FASB specifically, was changed by the issuance of the Metcalf Report (1976b). In the early months of 1976, the staff of the Subcommittee on Reports, Accounting and Management, chaired by Senator Metcalf, began to accumulate information on the operations of the FASB. In addition, the staff generated operating information on the (1) big eight public accounting firms, (2) AICPA, (3) National Association of State Boards of Accountancy, and (4) sponsoring organizations of the FASB other than the AICPA. The staff generated over 1700 pages of information on the accounting profession and the process of setting standards in the United States. The final report, issued in December 1976, accused the profession of not adequately serving the public. This is a serious charge, unprecedented in the history of setting standards.

Also, in 1976, the U.S. House Subcommittee on Oversight and Investigations conducted an investigation of the Securities and Exchange Commission (SEC). The resulting Moss Report (1976a) was primarily concerned with the SEC's regulation in the area of illegal



payments, bribes, kickbacks, etc. of corporations monitored by the Commission. The final report, however, included accusations against the accounting profession similar to the accusations of the Metcalf Report.

The increased activity of the SEC in 1976, and subsequently, also affected the operating environment of the Board. In March 1976, the SEC issued Accounting Series Release 190, requiring the disclosure of replacement cost data in published financial statements. The topic addressed by that release was currently under consideration by the FASB in its conceptual framework project. Accounting Series Release 253, requiring certain reporting methods for oil and gas producing companies, represents the latest significant role of the SEC in establishing accounting standards.

To generalize, it appears that the FASB moved into an operating environment in 1976 different from that it had previously experienced. A comparison of the two MDS representations generated from the eleventh and twelfth input bases is made to discern any temporal change in groupings and relationships. industry and the public accounting representational organizations.

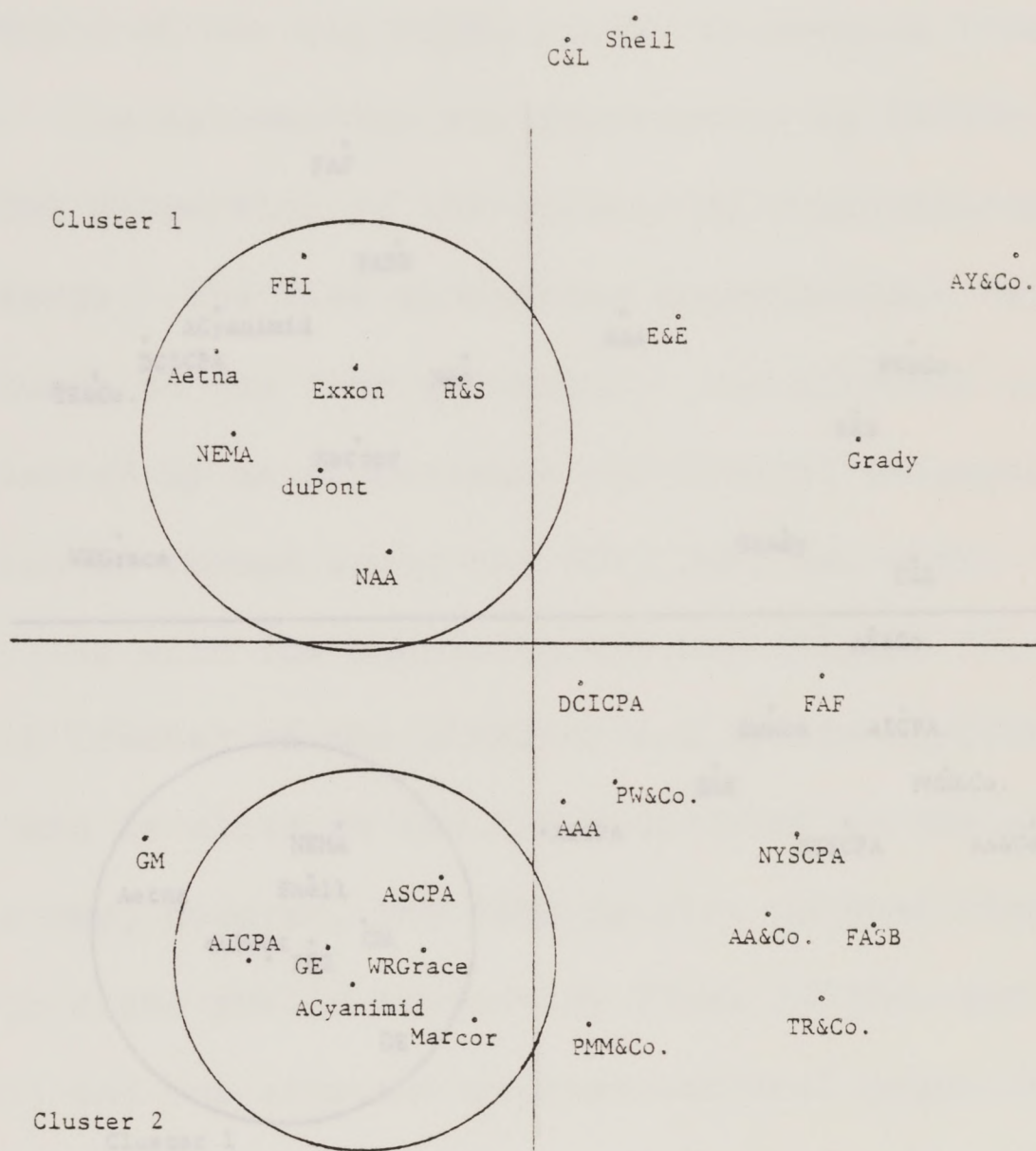


Both composite maps are reported in two-dimensional space. Appendix I includes Stress values for up to four-dimensional maps, and a plotting of the values reveals an elbow for each of the maps at the two-dimensional point. Figures 5 and 6 are, respectively, the pre-1/1/76 and post-1/1/76 composite maps.

Pre-1/1/76 Composite Map. A weak preparer/attestor horizontal dimension is present in Figure 5. As discussed in the previous section, this dimension is present in the composite map (Figure 4). Notable exceptions in the preparer quadrants, however, are the AICPA, H&S, and the ASCPA. Shell represents an exception in the attestor quadrants. No identifiable pattern emerges for labeling the vertical axis. Furthermore, the attestor/preparer axis labeling is weakened by clusters within the map that include both attestors and preparers. Cluster 1, for example, includes six industry and industry representatives (preparers), and one big eight public accounting firm (attestor). Cluster 2 includes four industry and two public accounting representational organizations.



FIGURE 5  
Pre-1/1/76 Composite Map

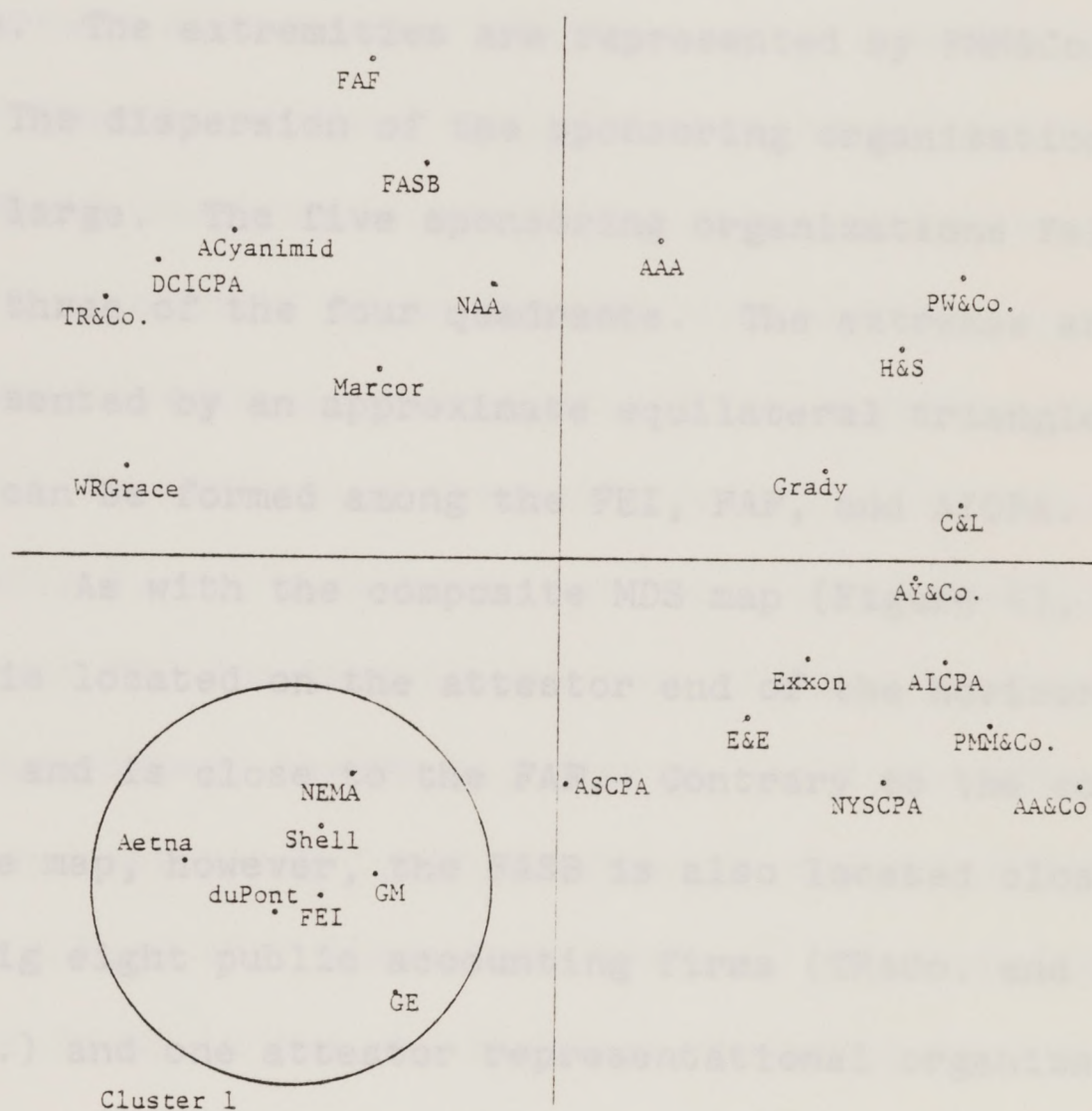


See Table 1 for abbreviations used for respondents.  
See Table 1 for abbreviations used for respondents.



FIGURE 6

Post-1/1/76 Composite Map



See Table 1 for abbreviations used for respondents.

Post-1/1/76 Composite Map. In Figure 6, a strong preparer/attester horizontal axis emerges. The exceptions are TR&Co., DCICPA, and Exxon. The vertical



Two potential groups represented by the (1) big eight public accounting firms and (2) sponsoring organizations of the FASB do not surface in the map. The dispersion of the big eight public accounting firms is large. The extremities are represented by PMM&Co. and C&L. The dispersion of the sponsoring organizations is also large. The five sponsoring organizations fall into three of the four quadrants. The extremes are represented by an approximate equilateral triangle that can be formed among the FEI, FAF, and AICPA.

As with the composite MDS map (Figure 4), the FASB is located on the attestor end of the horizontal axis, and is close to the FAF. Contrary to the composite map, however, the FASB is also located close to two big eight public accounting firms (TR&Co. and AA&Co.) and one attestor representational organization (NYSCPA). The FASB has taken on an outlier position in Figure 5, but is not as extreme as in the composite map.

Post-1/1/76 Composite Map. In Figure 6, a strong preparer/attestor horizontal axis emerges. The exceptions are TR&Co., DCICPA, and Exxon. The vertical



axis represents a weak "conduciveness to change" axis. Considering those respondents close to the vertical axis, the FAF and AAA historically have been amenable to major changes in accounting principles and disclosures. At the other extreme, major industry and their representational organizations have been slow to recommend adoption of new accounting techniques. The FEI is an example of an organization historically favoring the status quo in accounting reporting practices. In extracting the preference data to generate Appendix G, the historical philosophies of the FAF, AAA, and FEI for many issues were confirmed. It is not surprising, therefore, that at least one of the MDS maps reveals a "conduciveness to change" dimension. It is only a weak dimension, however, as exceptions can be found in the map based on financial reporting philosophies publicly espoused by certain respondents.

One distinct cluster exists that is comprised of five industry and two industry representational organizations. Five other respondents common to that group, however, are spread throughout two other

sent in Figure 5.



quadrants. Consequently, cluster one constitutes only a subset of industry, or preparer, respondents.

The FASB takes on a different position in Figure 6 than in the previous MDS maps reported. Concerning the horizontal dimension, it is located on the preparer side of the axis. The degree of alignment with the preparers, however, is not great because of its closeness to the center of the horizontal axis. Regarding the vertical axis, the FASB's position connotes a strong conduciveness to change. This is consistent with the major changes required by the FASB in areas as segmental reporting and leases. As in Figure 4, the respondent closest to the FASB is the FAF.

FASB, be Comparison of Pre-1/1/76 and Post-1/1/76 Composite Maps. Two major differences exist between the two composite maps. The preparer/attestor horizontal dimension, while present in both maps, is more distinct in the post-1/1/76 map. In Figure 6, seven big eight public accounting firms, and two attestor representational organizations, including the AICPA, form a more concentrated set of attestors affiliates than is present in Figure 5. In the standards-setting process are



The second difference in the composite maps concerns the FASB's position among the respondents. The FASB moves from the attestor end of the horizontal axis in Figure 5 to a preparer position in Figure 6. It is interesting to note that TR&Co., DCICPA, and particularly the FAF, move with the FASB. In both maps, the FASB remains an outlier with regards to the respondents.

As stated earlier, the pre-1/1/76 and post-1/1/76 composite maps are generated to discern any differences in preference relationships over time. The time periods chosen for comparison are based on substantial changes in the operating environment of the FASB, beginning around 1/1/76. Activities in the public sector, specifically actions by Congress and the SEC, can be characterized as threatening to the survival of the FASB. It is hard to imagine that the activities of the parties involved in the standards-setting process were not affected by this drastic environmental change.

Unfortunately, the roles actually played by parties involved in the standards-setting process are



virtually unknown, and unresearched. The respondents in the MDS configurations are a subset of those parties involved in the process. It is difficult to hypothesize the reason for changes in the pre-1/1/76 and post-1/1/76 composite maps, however, without some understanding of the roles played by the respondents. It is also possible that the differences in the MDS configurations are not the result of environmental changes. Such factors as the composition of the policy questions, or substantive differences among the projects, may be confounded with the environmental change factor. Consequently, an underlying rationale for the difference between the pre-1/1/76 and post-1/1/76 composite maps is not provided in the dissertation. Perhaps as more research on setting standards is conducted, the difference between the configurations will take on meaning.

In comparing the MDS maps reported thus far (Figures 4-6), two traits are common to all three configurations. First, a basic preparer/attestor horizontal axis is present in all the maps. The axis is most clearly identified in Figure 4, the composite MDS map. Second, the FASB's position among the respondents



is one of an outlier. The FASB is not part of any identifiable cluster of respondents, but is consistently close to the FAF. The MDS maps reported in the next section are based on a further decomposition of the data base used to generate Figures 5 and 6.

#### MDS Map of Individual Projects

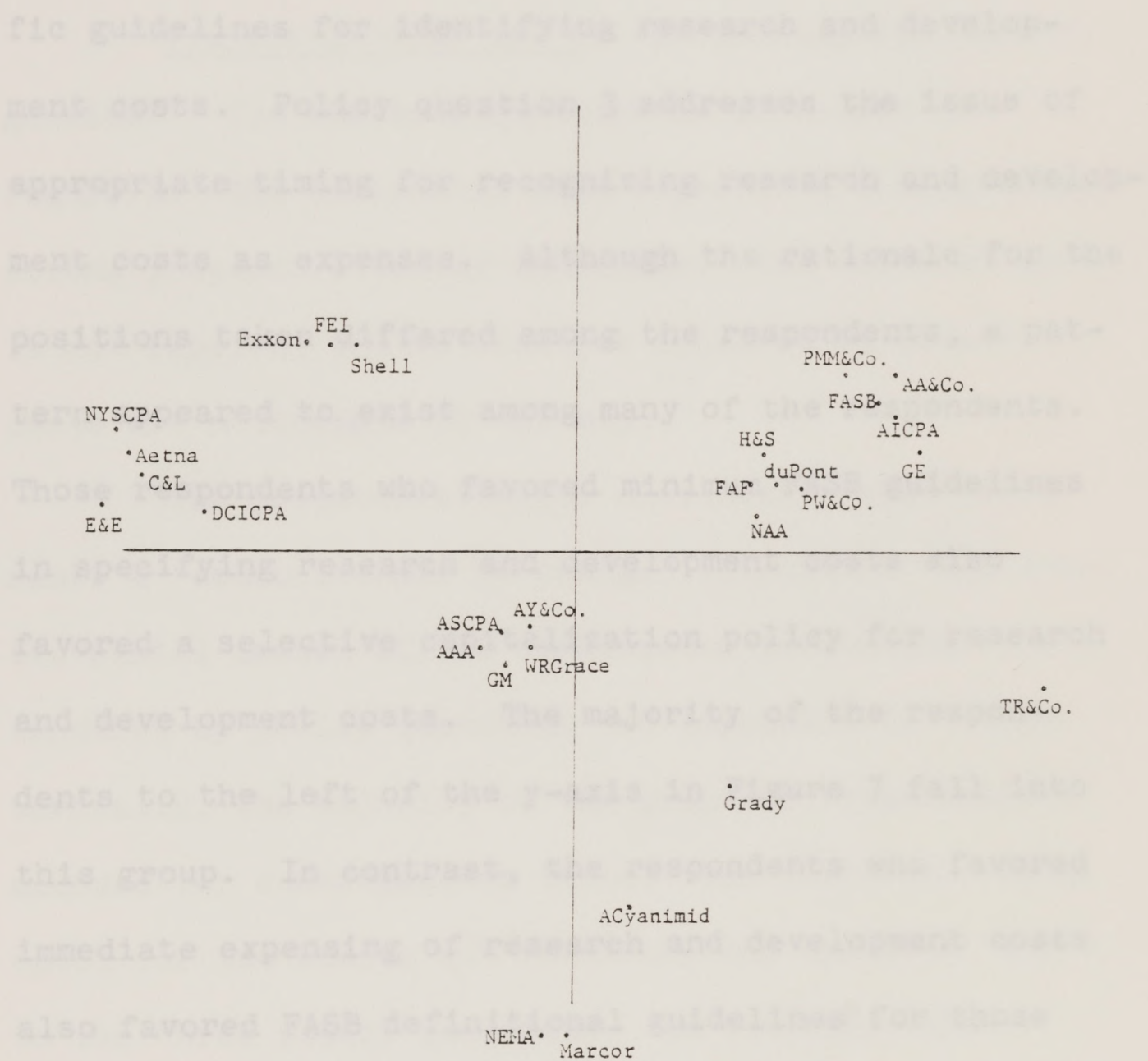
MDS configurations are generated for each of the nine projects selected for analysis in the dissertation. Stress values for all nine projects are reported in Appendix I. The stress values for all projects are low at the two-dimensional level; consequently, the two-dimensional maps are interpreted for all the projects.

Project 1--SFAS No. 2, "Accounting for Research and Development Costs." The MDS configuration is presented in Figure 7. A predominantly horizontal dispersion of the respondents is present, with the extremes represented by E&E and TR&Co. No discernible pattern among the respondents emerges from the map, however. Several clusters can be visually identified in the map, but common characteristics of the respondents in the clusters are not discernible.



FIGURE 7

MDS Map for SEAS No. 2



See Table 1 for abbreviations used for respondents.

A final interesting characteristic of the map relates to the FASB's position among the respondents. As in the other maps interpreted thus far, the FASB



A review of Appendix E indicates that policy questions 1 and 3 are the most discriminating factors. Policy question 1 deals with the FASB providing specific guidelines for identifying research and development costs. Policy question 3 addresses the issue of appropriate timing for recognizing research and development costs as expenses. Although the rationale for the positions taken differed among the respondents, a pattern appeared to exist among many of the respondents. Those respondents who favored minimum FASB guidelines in specifying research and development costs also favored a selective capitalization policy for research and development costs. The majority of the respondents to the left of the y-axis in Figure 7 fall into this group. In contrast, the respondents who favored immediate expensing of research and development costs also favored FASB definitional guidelines for those costs. The majority of these respondents are to the right of the y-axis in Figure 7.

A final interesting characteristic of the map relates to the FASB's position among the respondents. As in the other maps interpreted thus far, the FASB



and FAF are close. Figure 7 reveals, however, that a large number of other respondents also are located in the first quadrant with the FASB and the FAF.

Project 2--SFAS No. 5, "Accounting for Contingencies." The MDS configuration is presented in Figure 8. The horizontal axis represents a moderately strong preparer/attestor dimension. The vertical axis is not labeled, and no distinct clusters of respondents are noticeable in the map.

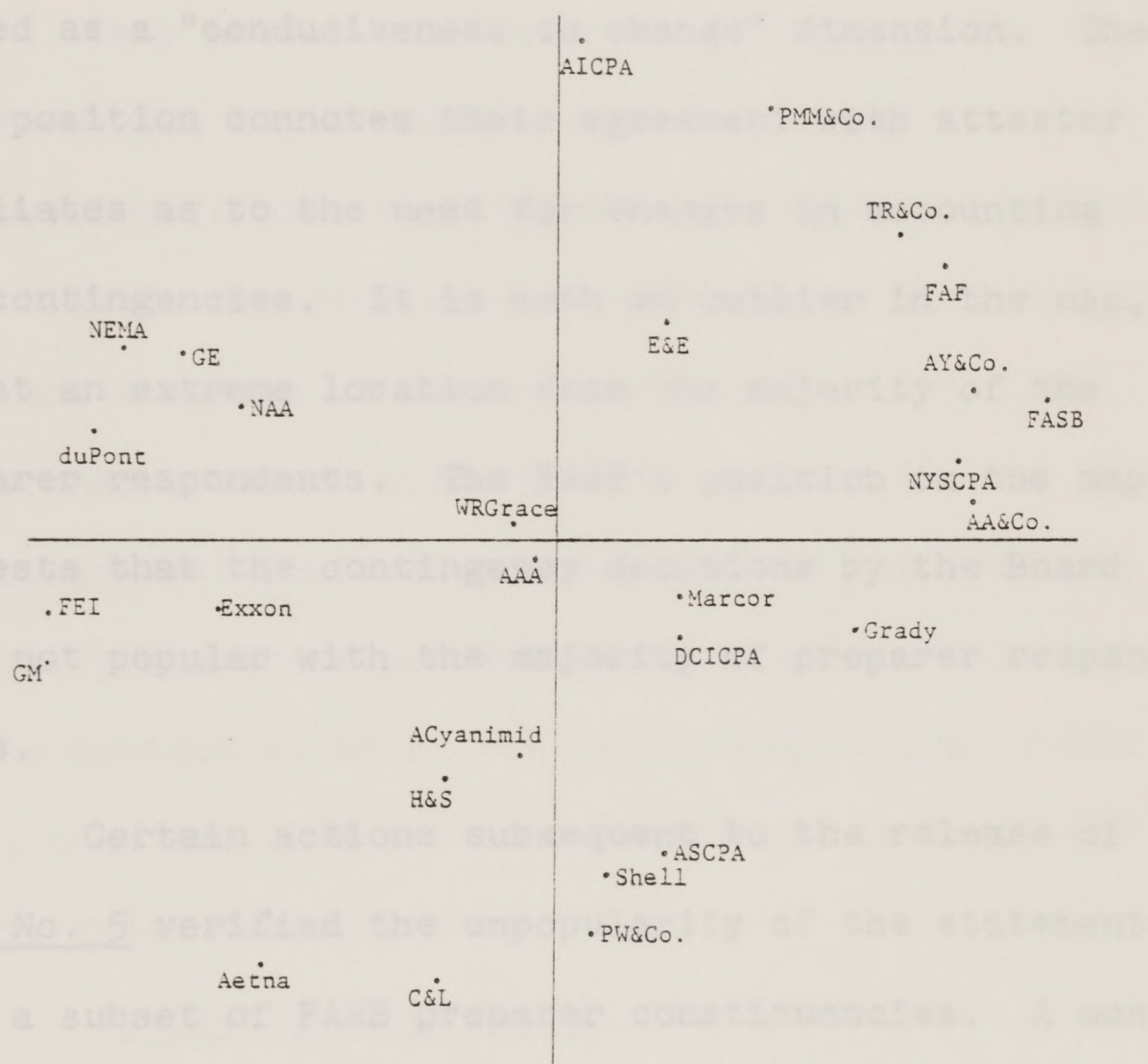
The preparer/attestor distinction also represents a "conduciveness to change" dimension. The controversial issues of the contingency project are captured by policy questions 5-7 (Appendix D). Historically, the majority of the preparer respondents accrued for contingencies before they occurred. They opted for the status quo position, and answered "yes" to the three policy questions. In contrast, the majority of the attestor respondents were opposed to the accrual of contingencies in advance of their occurrence, and responded "no" to those questions. The FAF and Grady aligned with the attestors in opposing



accrual. The extremes are represented by the FEI, and AA&Co. and AY&Co.

FIGURE 3

The FASB position MDS Map for SFAS No. 5 respondents is interesting, especially when the horizontal axis is viewed as a "conductiveness" dimension. The FASB position connotes their agreement with the preparer affiliates as to the need for changes in accounting for contingencies. It is not as extreme as the preparer respondents. The FASB's position on the map suggests that the contingency statement by the Board were not popular with the preparer respondents. Certain actions subsequent to the release of SFAS No. 5 verified the unpopularity of the statement with a subset of FASB preparer constituencies. A month after issuance of the statement, the Risk and Insurance Managers



See Table 1 for abbreviations used for respondents. The Society's opposition was reported in an article entitled, "Society Resolves It Will Fight the FASB's Rollings" (Business Insurance, 5/5/75, p. 42). Aetna, one of



accrual. The extremes are represented by the FEI, and AA&Co. and AY&Co.

The FASB position among the respondents is interesting, especially when the horizontal axis is viewed as a "conduciveness to change" dimension. The FASB position connotes their agreement with attestor affiliates as to the need for changes in accounting for contingencies. It is both an outlier in the map, and at an extreme location from the majority of the preparer respondents. The FASB's position on the map suggests that the contingency decisions by the Board were not popular with the majority of preparer respondents.

Certain actions subsequent to the release of SFAS No. 5 verified the unpopularity of the statement with a subset of FASB preparer constituencies. A month after issuance of the statement, the Risk and Insurance Management Society (RIMS) formed a special task force to seek reconsideration of SFAS No. 5. The Society's opposition was reported in an article entitled, "Society Resolves It Will Fight the FASB's Rulings" (Business Insurance, 5/5/75, p. 42). Aetna, one of



the respondents in the MDS map, is an active member of RIMS. The special task force of RIMS was not successful in achieving reconsideration, and the statement is currently in effect.

Many accountants consider SFAS No. 5 the first controversial topic addressed by the Board. It is interesting to note that the MDS configuration graphically reveals the diversity of preferences between the FASB and a subset of its constituencies. The FASB preferences, almost diametrically opposed to many of the respondent preferences, resulted in the FASB and several preparer respondents located at opposite ends of the horizontal axis. It is not surprising, therefore, that the FASB met some resistance in acceptance of its final decisions.

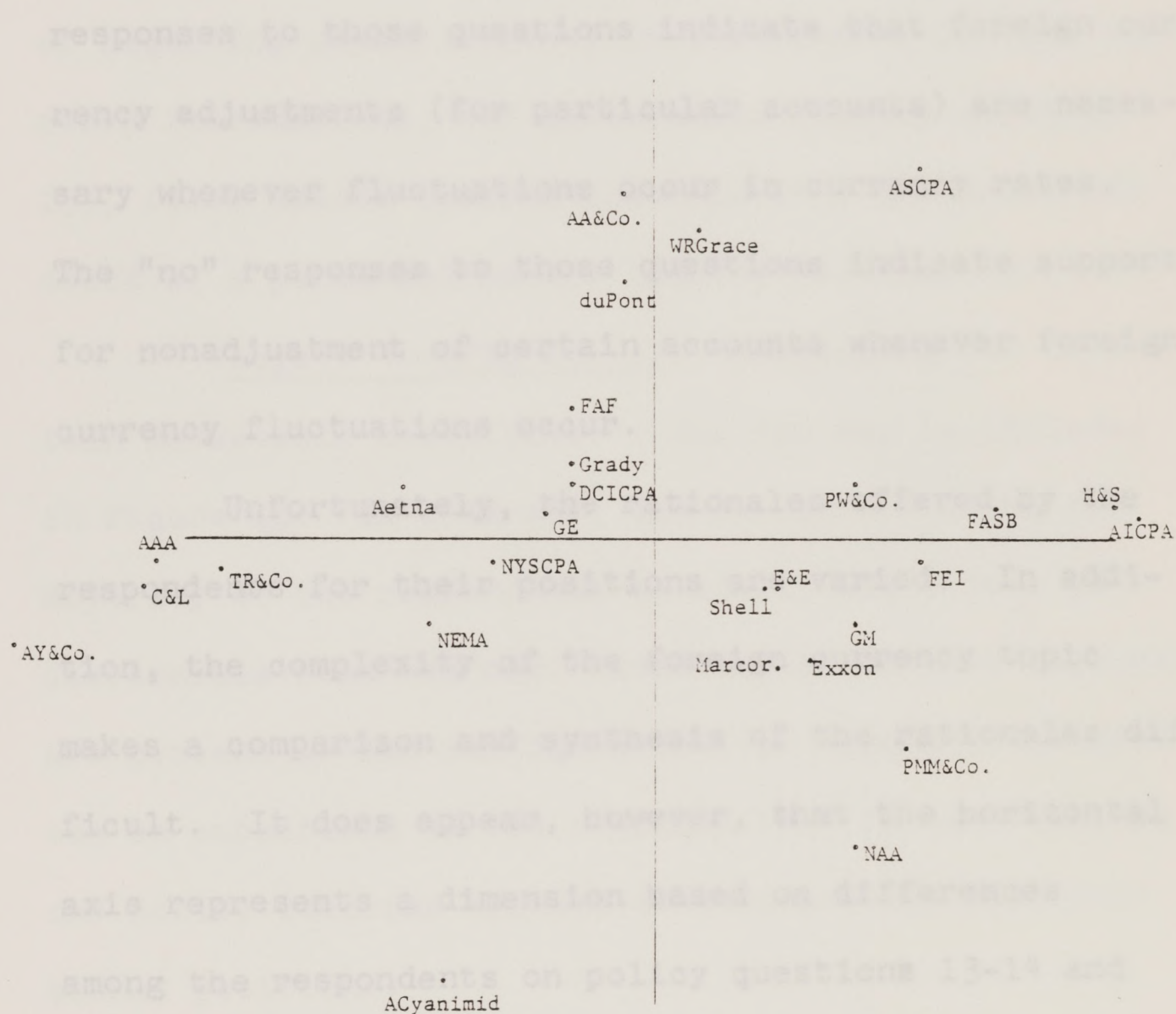
Project 3--SFAS No. 8, "Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements." The MDS configuration for this project is presented in Figure 9. No pattern is discernible among the respondents based on respondent attributes reported in Appendix B. The dispersion among the respondents is mostly generated



by policy questions 13-14 and 16-17. For example, AY&Co., C&L, AAA, and TR&Co. all answered "yes" to the four questions. In contrast, the AICPA, R&S, FEI, and PW&Co. all answered "no" to these questions. The "yes" responses to these questions indicate that foreign currency adjustments (for particular accounts) are necessary whenever fluctuations occur in currency rates.

FIGURE 9

MDS Map for SFAS No. 3



See Table 1 for abbreviations used for respondents.

the respondents at either end of the dimension, it is difficult to label the axis. In this project, however, it appears clear that the accounting issues dominated the relational alignment among the respondents.



by policy questions 13-14 and 16-17. For example, AY&Co., C&L, AAA, and TR&Co. all answered "yes" to the four questions. In contrast, the AICPA, H&S, FEI, and PW&Co. all answered "no" to those questions. The "yes" responses to those questions indicate that foreign currency adjustments (for particular accounts) are necessary whenever fluctuations occur in currency rates. The "no" responses to those questions indicate support for nonadjustment of certain accounts whenever foreign currency fluctuations occur.

Unfortunately, the rationales offered by the respondents for their positions are varied. In addition, the complexity of the foreign currency topic makes a comparison and synthesis of the rationales difficult. It does appear, however, that the horizontal axis represents a dimension based on differences among the respondents on policy questions 13-14 and 16-17. Without a consistent line of reasoning among the respondents at either end of the dimension, it is difficult to label the axis. In this project, however, it appears clear that the accounting issues dominated the relational alignment among the respondents.



Contrary to all but one of the maps previously reported, the positions of the FASB and FAF are not close. Also, the FASB is not a distinct outlier as in the previous MDS maps. The FASB position is the result of requiring nonadjustment, in a period of foreign currency fluctuations, for inventories (policy question 13), fixed assets (policy question 14), and preferred stock of a permanent nature (policy question 17).

Project 4--SFAS No. 12, "Accounting for Certain Marketable securities." The MDS map is included in Figure 10. In this map, the dispersion among the majority of the respondents is small, and little is discernible from the map. Even though several clusters are present in the configuration, no common attributes can be subscribed to the respondents. In addition, no one policy question appears to dominate the MDS relational positions.

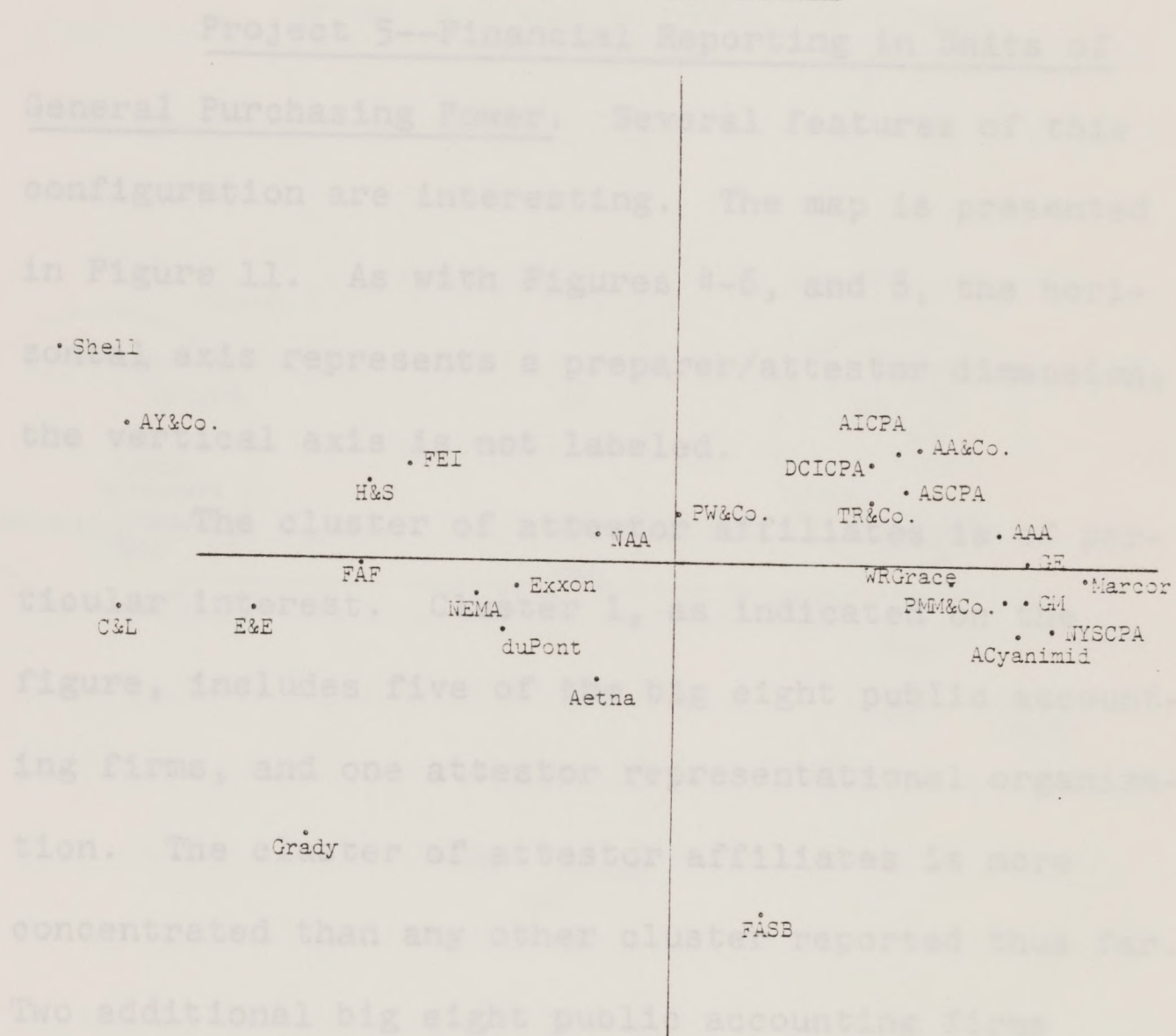
One interesting aspect of the map is the FASB's position among the respondents. The majority of the respondents are located on or near the x-axis. This represents very little dispersion along the vertical axis. The FASB's location on the map is an exception,



however. The y-axis coordinate of the FASB is greater than the y-axis coordinate of any respondent. The FASB is an extreme outlier in this MDS map.

FIGURE 10

MDS Map for SFAS No. 12



and the DCICPA are distinctly separate from the other attester respondents. On this particular project, the homogeneity among the attester respondents is strong.



however. The y-axis coordinate of the FASB is greater than the y-axis coordinate of any respondent. The FASB is an extreme outlier in this MDS map.

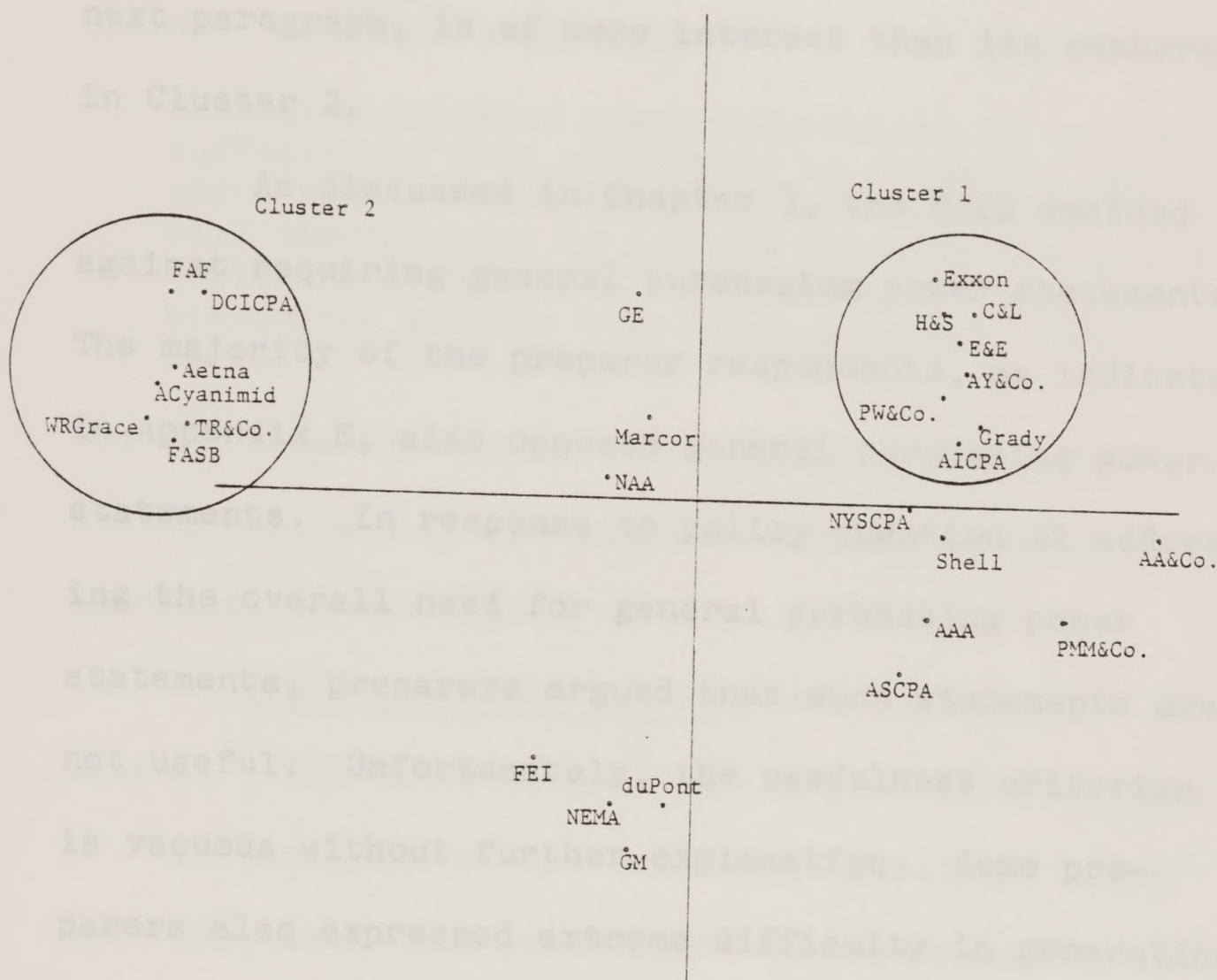
Project 5--Financial Reporting in Units of General Purchasing Power. Several features of this configuration are interesting. The map is presented in Figure 11. As with Figures 4-6, and 8, the horizontal axis represents a preparer/attestor dimension; the vertical axis is not labeled.

The cluster of attestor affiliates is of particular interest. Cluster 1, as indicated on the figure, includes five of the big eight public accounting firms, and one attestor representational organization. The cluster of attestor affiliates is more concentrated than any other cluster reported thus far. Two additional big eight public accounting firms (PMM&Co. and AA&Co.), while not part of the cluster, are within close proximity of the cluster. Only TR&Co. and the DCICPA are distinctly separate from the other attestor respondents. On this particular project, the homogeneity among the attestor respondents is strong.



FIGURE 11

MDS Map for General Purchasing Power Project



See Table 1 for abbreviations used for respondents.



A second cluster is present in the map. The cluster does not take on meaning, however, because the members have dissimilar characteristics. The FASB's dimensional position on the map, as discussed in the next paragraph, is of more interest than its membership in Cluster 2.

As discussed in Chapter 3, the FASB decided against requiring general purchasing power statements. The majority of the preparer respondents, as indicated in Appendix E, also opposed general purchasing power statements. In response to policy question 22 addressing the overall need for general purchasing power statements, preparers argued that such statements are not useful. Unfortunately, the usefulness criterion is vacuous without further explanation. Some preparers also expressed extreme difficulty in generating general purchasing power statements, and suggested that the costs of preparing the statements far outweighed the benefits of such statements. As might be expected, many proponents of general purchasing power statements reversed these arguments to support requiring such statements.



Figure 11 reveals the FASB deeply embedded on the preparer end of the horizontal dimension. Among other reasons, the FASB concluded that the costs of general purchasing power statements could not be justified. The FASB concluded:

General purchasing power information is not now sufficiently well understood by preparers and users and the need for it is not now sufficiently well demonstrated to justify imposing the cost of implementation upon all preparers of financial statements at this time (Status Report, June 4, 1976).

The FAF also opposed requiring general purchasing power statements, and its position on the map is essentially identical to the FASB.

Project 6--SFAS No. 13, "Accounting for Leases." The MDS configuration is presented in Figure 12. The analysis of the relational positions among the respondents and the respondent arguments for their positions does not reveal an identifiable pattern in the map. Several features of the map are of interest, however.

The big eight public accounting firms are widely dispersed. In fact, all four quadrants contain at least one of the eight firms. The positions of C&L



and PW&Co. characterize the degree of dispersion.

Historically, accounting for leases has been a contro-

FIGURE 12

versial and difficult MDS Map for SFAS No. 13

The disperse MDS mapping of the eight accounting

C&L

firms reveals that the lease issues are still subject

to debate and disagreement among accountants.

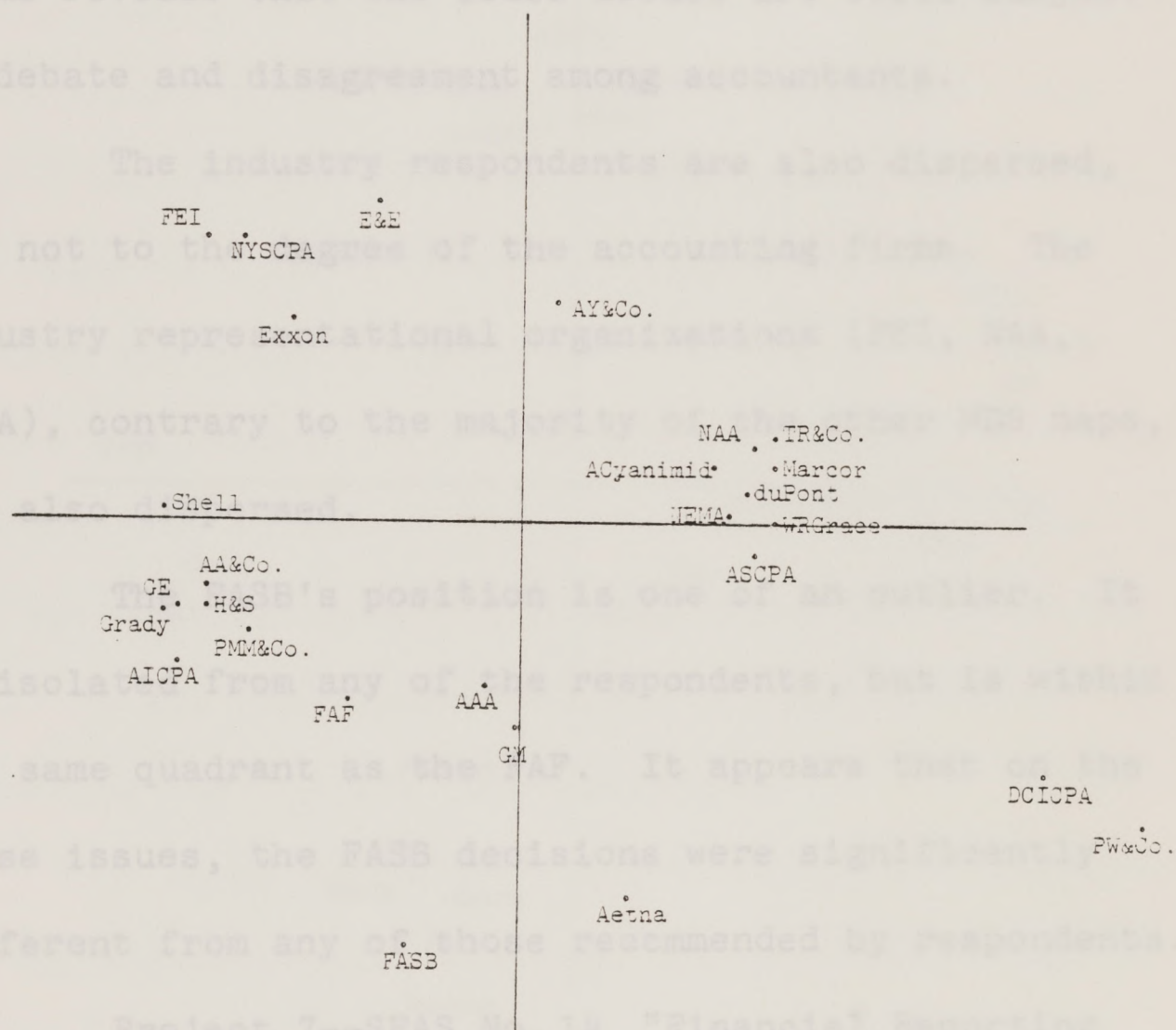
The industry respondents are also dispersed,

but not to the degree of the accounting firms. The

industry representative organizations (AIA, NAA,

NEMA), contrary to the majority of other MDS maps,

are also dispersed.



See Table 1 for abbreviations used for respondents.

figuration is presented in Figure 13. The respondents

are spread almost evenly among the four quadrants.

The respondents are not aligned by industry or public

accounting, as in several of the other maps, but appear



and PW&Co. characterize the degree of dispersion. Historically, accounting for leases has been a controversial and difficult topic for accountants to resolve. The disperse MDS mapping of the big eight accounting firms reveals that the lease issues are still subject to debate and disagreement among accountants.

The industry respondents are also dispersed, but not to the degree of the accounting firms. The industry representational organizations (FEI, NAA, NEMA), contrary to the majority of the other MDS maps, are also dispersed.

The FASB's position is one of an outlier. It is isolated from any of the respondents, but is within the same quadrant as the FAF. It appears that on the lease issues, the FASB decisions were significantly different from any of those recommended by respondents.

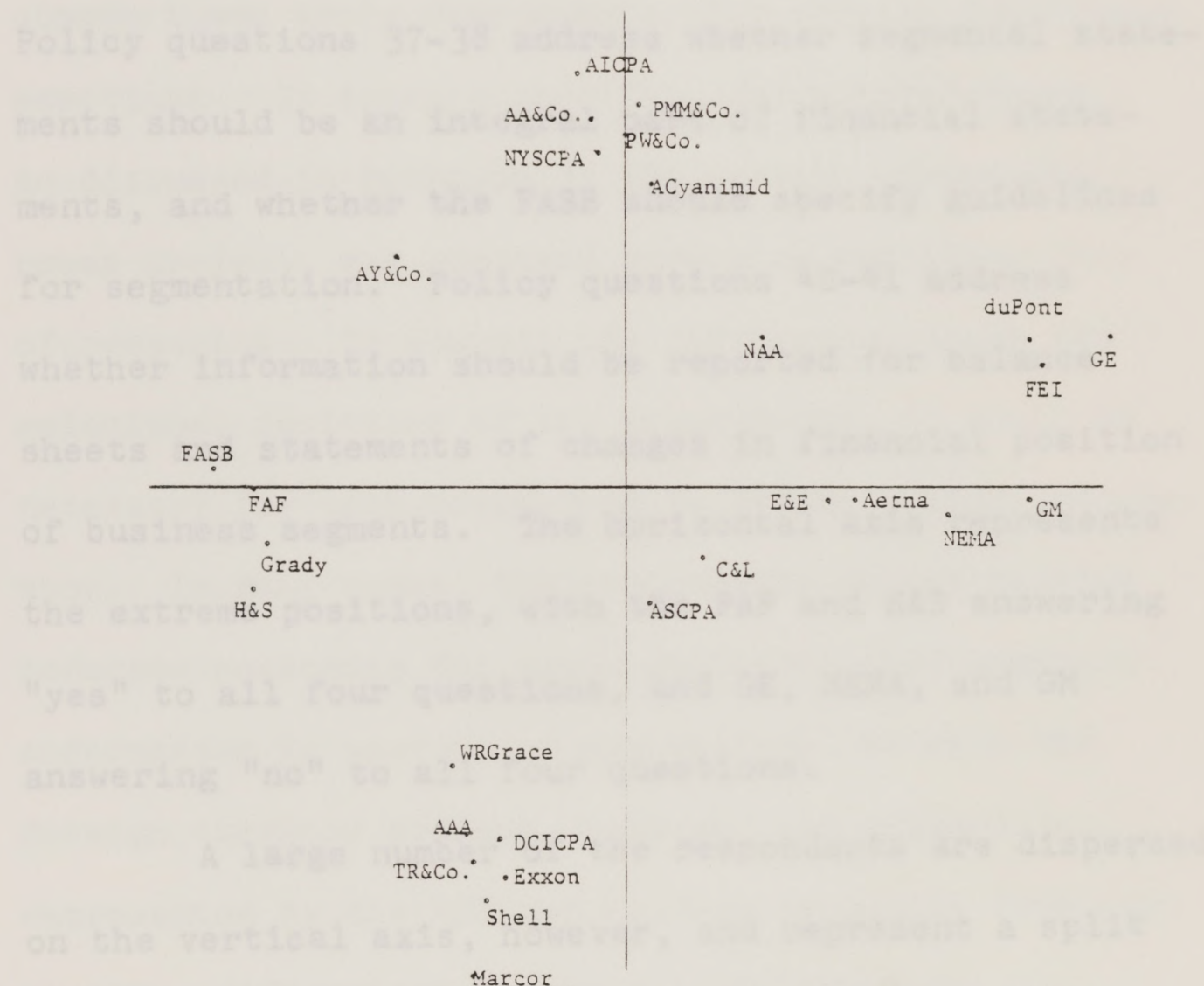
Project 7--SFAS No. 14, "Financial Reporting for Segments of a Business Enterprise." The MDS configuration is presented in Figure 13. The respondents are spread almost evenly among the four quadrants. The respondents are not aligned by industry or public accounting, as in several of the other maps, but appear



to be dispersed based on the issues unique to segmental reporting.

FIGURE 13

MDS Map for SFAS No. 14



See Table 1 for abbreviations used for respondents.

that did not include balance sheet information or statement of changes in financial position information. At the other extreme, Exxon, Shell, and TR&Co., for example, favored some segmental information for the



to be dispersed based on the issues unique to segmental reporting.

The discriminating issues for the project are represented by policy questions 37-38 and 40-41. Policy questions 37-38 address whether segmental statements should be an integral part of financial statements, and whether the FASB should specify guidelines for segmentation. Policy questions 40-41 address whether information should be reported for balance sheets and statements of changes in financial position of business segments. The horizontal axis represents the extreme positions, with the FAF and H&S answering "yes" to all four questions, and GE, NEMA, and GM answering "no" to all four questions.

A large number of the respondents are dispersed on the vertical axis, however, and represent a split on the four issues. The AICPA, PMM&Co., and AA&Co., for example, favored a degree of segmental reporting that did not include balance sheet information or statement of changes in financial position information. At the other extreme, Exxon, Shell, and TR&Co., for example, favored some segmental information for the



two statements. Those respondents did not favor FASB specification for segments, however.

As with the foreign currency and general purchasing power projects, it is difficult to discern a common theme among respondents with similar preference positions. It appears that the "usefulness" theme, as discussed in relation to the general purchasing power project, was espoused more than any other line of reasoning. To discern the differences among the relational positions of the respondents, it would be necessary for each respondent to define useful information. In many cases, the respondents do not provide concrete reasoning for their decisions that segmental information is useful, or not useful. As with the foreign currency project, however, the dispersion represented by the MDS map appears to result from substantive differences on the policy questions.

Concerning the FASB's relational position to the respondents, the FAF and FASB have essentially identical positions on the map. As recommended by the FAF, SFAS No. 14 requires extensive segmental reporting and disclosures.



Project 8--SFAS No. 15, "Accounting by Debtors and Creditors for Troubled Debt Restructurings." The MDS map is presented in Figure 14. The dispersion of the respondents is primarily horizontal, with the extremes represented by ASCPA and Aetna. No identifiable pattern emerges from the map based on characteristics of the respondents. The cluster (1) of respondents near the map origin are those respondents who took neutral positions on the majority, or all, of the policy questions.

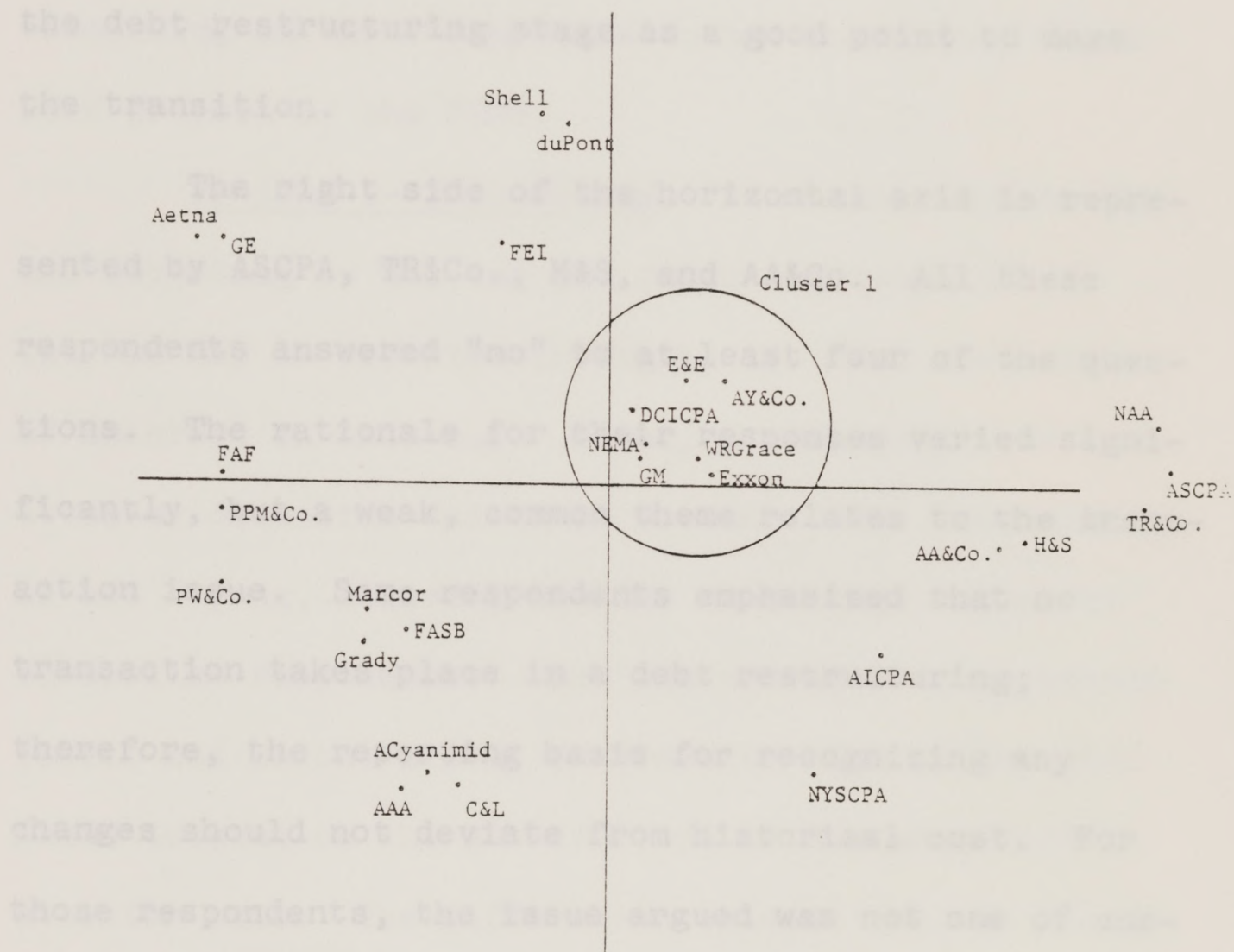
In analyzing the respondents' positions on policy questions 43-47, as detailed in Appendix D, a consistent pattern emerges for the respondents at either end of the horizontal axis. Generally, the policy questions address the appropriate accounting for various types of debt restructurings.

Aetna, GE, FAF, PMM&Co., and PW&Co. (left side of the horizontal axis) all answered "yes" to at least four of the five questions. Two different rationales are discussed by those respondents. Some respondents viewed debt restructurings as a new and separate transaction from the original debt transaction;



FIGURE 14

MDS Map for SFAS No. 15



See Table 1 for abbreviations used for respondents.



for that reason, the transaction should be recorded based on current transaction information. A different set of respondents, however, emphasized the need to record debt transactions at current values, and viewed the debt restructuring stage as a good point to make the transition.

The right side of the horizontal axis is represented by ASCPA, TR&Co., H&S, and AA&Co. All these respondents answered "no" to at least four of the questions. The rationale for their responses varied significantly, but a weak, common theme relates to the transaction issue. Some respondents emphasized that no transaction takes place in a debt restructuring; therefore, the reporting basis for recognizing any changes should not deviate from historical cost. For those respondents, the issue argued was not one of current values versus historical values, but one of transaction versus no transaction taking place.

It is tempting to label the horizontal axis a current cost/historical cost dimension. Two potential problems exist with that label, however. First, the current cost and transaction issues are confounded if



the respondents viewed the issues as two independent arguments. Second, certain respondents on the historical cost end of the dimension, notably AA&Co. and TR&Co., have advocated some degree of current cost accounting in their responses to the conceptual framework project of the FASB.

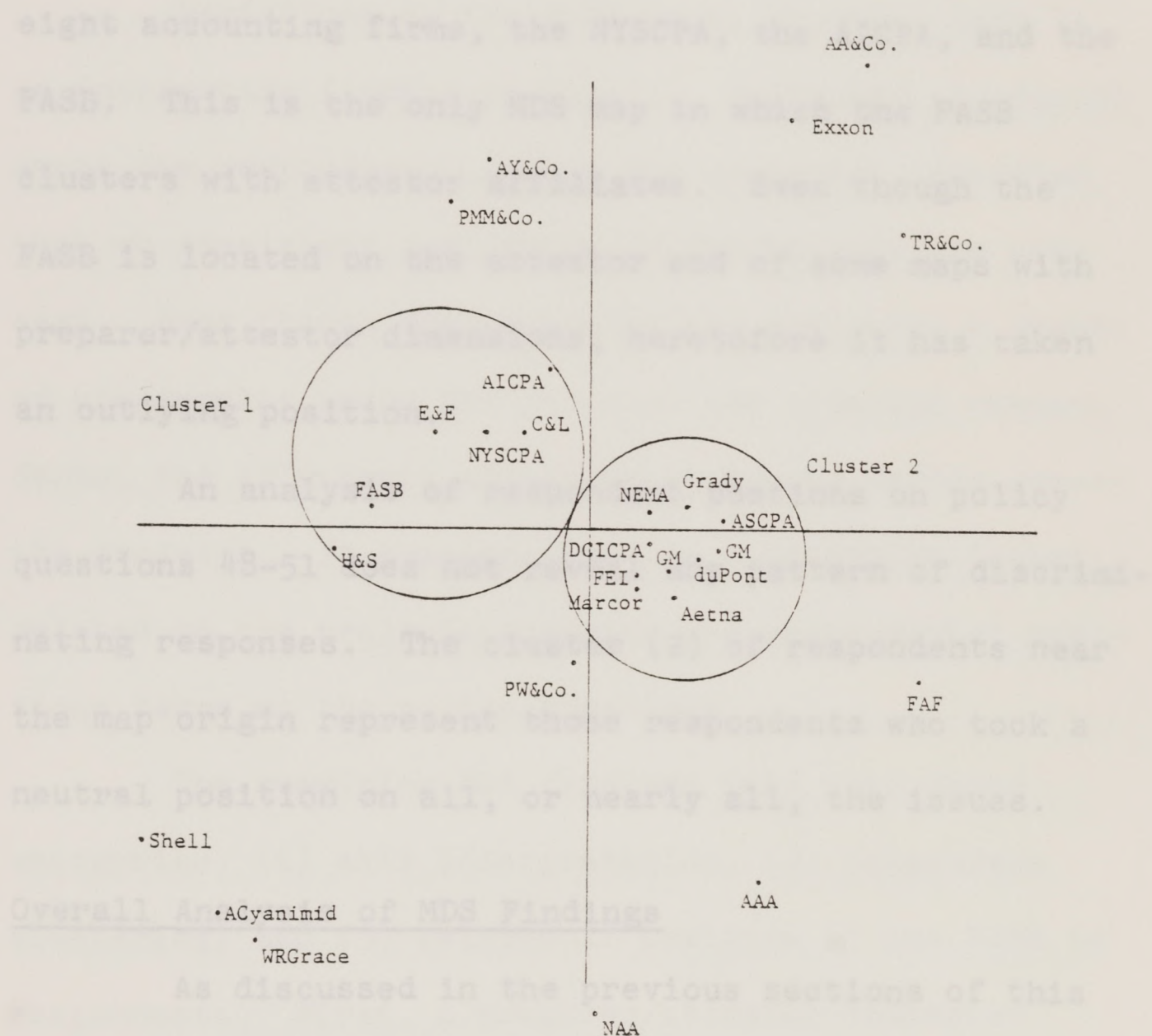
Project 9--SFAS No. 19, "Financial Accounting and Reporting by Oil and Gas Producing Companies."

The MDS map is reported in Figure 15. Two items are of interest in this map. First, a weak preparer/attestor dimension exists in the map. The dimension is not strong, however, because of a large number of borderline respondents. The two petroleum respondents (Shell and Exxon) are at extremes to each other, with Exxon located on the attestor end of the preparer/attestor axis. The differences between the two relate to policy questions 49-51. Shell advocated successful efforts costing, no changes in SFAS No. 9, and no supplemental fair value disclosures on reserves. Exxon recommended a costing technique different from both successful efforts and full costing. Exxon also



FIGURE 15

MDS Map for SFAS No. 19



See Table 1 for abbreviations used for respondents.



recommended a reconsideration of SFAS No. 9, and reporting current value information on oil reserves.

The second item of interest is the FASB's position on the map. A cluster (1) is formed by three big eight accounting firms, the NYSCPA, the AICPA, and the FASB. This is the only MDS map in which the FASB clusters with attestor affiliates. Even though the FASB is located on the attestor end of some maps with preparer/attestor dimensions, heretofore it has taken an outlying position.

An analysis of respondent positions on policy questions 48-51 does not reveal any pattern of discriminating responses. The cluster (2) of respondents near the map origin represent those respondents who took a neutral position on all, or nearly all, the issues.

#### Overall Analysis of MDS Findings

As discussed in the previous sections of this chapter, the interpretation of the twelve MDS maps varies from map to map. The interpretive features of the composite map (Figure 4), however, are found in one or more of the individual project maps. This is expected since the data base for the composite map is a



total of the data bases of the individual projects via a root-mean-square transformation. The individual projects maps provide insight into those projects affecting the composite map.

Variations in the individual projects maps is an interesting finding in itself. Different alignments among the respondents, across the projects, indicates that no consistent coalitions of respondents are present. Even though the composite map indicates a degree of homogeneity among the preparer and attestor respondents, the alignments within those groups varies across the projects. It appears that the substantive issues related to the projects dominate the respondents' positions taken on the policy questions.

The remaining MDS findings fall into three categories: (1) axis interpretation, (2) respondent clustering, and (3) relational position of the FASB to respondents. First, a preparer/attestor dimension emerges from the MDS maps. The dimension, to some degree of distinctness, is present in the composite map, both the pre-1/1/76 and post-1/1/76 maps, and three of the nine individual project maps. The preparer/attestor dimension provides evidence that



preference distinctions exist between preparers of financial statements and attestors to financial statements. The finding obviously is limited to the respondents in the data base, a subset of all preparers and attestors. In the preparer category, however, the respondents are some of the largest corporations in the United States, and organizations represented, and sponsored, by large corporations. The attestor category includes the eight largest public accounting firms in the United States, and state or national public accounting representational organizations.

The second overall finding concerns clustering of the respondents. The number of possible clusters within the MDS maps are great; a cluster is interesting, however, only if it takes on meaning based on characteristics of the cluster members. Interpreting the clusters in this dissertation is based on the respondent information reported in Appendix B.

Because Only one identifiable cluster emerges from the MDS maps. The composite map (Figure 4), and one of the individual project maps (Figure 11), contain a strong cluster of public accounting firms and representational



organizations. To a lesser extent, the cluster emerges in other MDS maps. Of the big eight public accounting firms, TR&Co. is an exception to the clustering in both Figures 4 and 11.

No other strong clusters are present in the maps. This includes the possible identifiable clusters of (1) preparers, and (2) sponsoring organizations of the FASB. In the composite MDS map, only a weak preparer cluster emerges that includes a subset of the preparer respondents. The sponsoring organizations do not come close to clustering in any of the maps.

Finally, the overall analysis of the MDS maps reveals two consistent features of the FASB position among the respondents. First, in the majority of the maps, the FASB takes on an outlying position. For any particular map, the outlier distinction is characterized by either nonmembership in respondent clusters, or extreme positions on the preparer/attestor dimension. Because of the FASB's consistent outlying position, it is particularly interesting to note that the FAF and the FASB are consistently close on the maps. In other words, the FAF is also a consistent outlier, with



similar movement between the FAF and the FASB. In the composite map, and in four of the individual project maps, the FAF and FASB preference similarities are indicated by their closeness on the maps.

The two research questions guiding the MDS analyses are presented in the first paragraph of this chapter. The research results reported in this chapter provide some answers to these questions. The discriminant analysis results, reported in the next chapter, also relate to research question one, and are compared to the MDS results at the end of that chapter.

In the process of addressing this question, the distinctness of a priori groups is tested. Specifically, the distinctness of the groups within two different classification schemes is described while determining their alignment with the groups.

As discussed in Chapter 3, the percent of correct classification of respondents into their a priori groups is used as an indication of the distinctness of the groups. The percent of correct classification is the ratio of correctly classified cases to total cases.



## CHAPTER 5

### DISCRIMINANT ANALYSIS RESULTS AND COMPARISON TO MULTIDIMENSIONAL SCALING RESULTS

In this chapter, discriminant analysis (DA) techniques are used primarily to address the following research question:

Is there correlational evidence between particular input preferences and FASB policy decisions?

In the process of addressing this question, the distinctness of a priori groups is tested. Specifically, the distinctness of the groups within two different classification schemes is described while determining FASB alignment with the groups.

As discussed in Chapter 3, the percent of correct classification of respondents into their a priori groups is used as an indication of the distinctness of the groups. The percent of correct classification is the ratio of correctly classified cases to total cases. The



respondent being tested for correct classification is excluded from the classification function generated for the group. The process is then repeated for every respondent to determine the number of correctly classified cases. FASB group alignment is determined by solving the classification functions using FASB variable values. In addition, the probability of the FASB belonging to a particular group is calculated based on the FASB's distance from the group mean.

This chapter consists of four sections. The DA results based on two different a priori grouping schemes are reported in the first two sections. The third section compares the results of the two grouping schemes. Since MDS and DA are used as complimentary techniques, the final section compares the results of the two techniques.

#### DA Results Based on the Two-group Classification Scheme

Table 5 lists the respondents comprising the a priori groups of the first classification scheme. The first scheme is comprised of two groups, labeled (A) attestors, and (B) preparers. Twenty-four respondents are used in this classification scheme.



The percent of correct respondent classification for the nine projects is reported in Table 6. The average correct classification across all projects of attestor respondents is 49%. The average for preparer respondents is 51%. The project with the highest percentage (75%) of correct attestor classification is SFAS No. 5, "Accounting for Contingencies." For preparers, the project with the highest percentage (91.7%) is SFAS No. 19, "Financial Accounting and Reporting by Oil and Gas Producing Companies." For both attestors and preparers, the project with the lowest percentage (41.6% and 16.7%, respectively) of correct classification is SFAS No. 2, "Accounting for Research and Development Costs."

The distinctness of the attestor and preparer groups varies greatly from project to project. From a descriptive standpoint, the degree of distinctness represented by the percentages can be evaluated by the reader. The overall percentage averages for the two groups, however, indicate a weak to moderate degree of group distinctness.

FASB alignment with either the attestor or preparer group for each of the projects is reported in



Table 7. The table includes the values of the classification functions solved for the FASB, and the probabilities of FASB alignment with the groups. The classification functions are included in Appendix J.

Across all nine projects, the FASB is aligned with the attester group on five projects, and aligned with the preparer group on four projects. For three of the five attester group alignments, the probability is high that the FASB is correctly aligned with the group. These projects are SFAS No. 1, "Accounting for Contingencies," SFAS No. 2, "Financial Reporting for Segments of a Business Enterprise," and SFAS No. 12, "Financial Accounting and Reporting by Oil and Gas Producing Companies." For the preparer group, three of the four FASB alignments are high. These projects are SFAS No. 13, "Accounting for Certain Marketable Securities," Financial Reporting in Units of General Purchasing Power, and SFAS No. 15, "Accounting for Debtors and Creditors for Troubled Debt Restructurings."

TABLE 6  
CORRECT CLASSIFICATION OF RESPONDENTS FOR TWO-GROUP SCHEME

Groups	Projects*								
	1	2	3	4	5	6	7	8	9
(A) Attestors	41.6	75	66.7	58.3	83	41.7	58.3	66.7	75
(B) Preparers	16.7	83	41.7	83.8	58.3	41.7	66.7	75	91.7

\*See Appendix A for a list of the projects.

All figures in the table are percentages.

The degree of FASB alignment with either the attester or preparer group is measured by the frequency of alignment across all nine projects. In considering



Table 7. The table includes the values of the classification functions solved for the FASB, and the probabilities of FASB alignment with the groups. The classification functions are included in Appendix J.

Across all nine projects, the FASB is aligned with the attestor group on five projects, and aligned with the preparer group on four projects. For three of the five attestor group alignments, the probability is high that the FASB is correctly aligned with the group. These projects are SFAS No. 5, "Accounting for Contingencies," SFAS No. 14, "Financial Reporting for Segments of a Business Enterprise," and SFAS No. 19, "Financial Accounting and Reporting by Oil and Gas Producing Companies." For the preparer group, three of the four FASB alignments are high. These projects are SFAS No. 12, "Accounting for Certain Marketable Securities," Financial Reporting in Units of General Purchasing Power, and SFAS No. 15, "Accounting by Debtors and Creditors for Troubled Debt Restructurings."

The degree of FASB alignment with either the attestor or preparer group is measured by the frequency of alignment across all nine projects. In considering



TABLE 7  
FASB ALIGNMENT FOR TWO-GROUP CLASSIFICATION SCHEME

Groups	Projects*								
	1	2	3	4	5	6	7	8	9
(A) Attestors	.56(1.2)	.99(1.0)	.51(5.0)	.07(-4.1)	.08(-2.1)	.29(2.0)	.90(.30)	.07(-1.1)	.99(4.5)
(B) Preparers	.44(.71)	.01(-4.9)	.49(4.8)	.93(-1.1)	.92(-.93)	.71(2.3)	.10(-1.91)	.93(-.43)	.01(-.08)

\*See Appendix A for a list of the projects.

Key to the table:

- The underscored numbers indicate the FASB group alignment for that project.
- The numbers without parentheses are probabilities of FASB alignment with the groups.
- The numbers within the parentheses are values of the classification functions, as reported in Appendix J, for the FASB.



only those projects with a high probability of FASB group alignment, the alignment is equally split between the two groups. In other words, 50% of the time the FASB is aligned with the attestor group, and 50% of the time it is aligned with the preparer group. These findings suggest that, over time, no consistent preference alignment exists between the FASB and either the attestor or preparer respondents.

DA Results Based on the Three-group  
Classification Scheme

Table 5 lists the respondents comprising the a priori groups of the second classification scheme. It is comprised of three groups: (A') big eight public accounting firms and the AICPA, (B') sponsoring organizations other than the AICPA, and (C') industry. Twenty-three respondents are used in this classification scheme.

The percent of correct respondent classification for the nine projects is reported in Table 8. The averages of correct classifications for the three groups are: (A') 47%, (B') 6%, and (C') 53%. The project with the highest percentage of correct classifications for all groups is SFAS No. 19, "Financial Accounting and



TABLE 8  
CORRECT CLASSIFICATION OF RESPONDENTS FOR THREE-GROUP SCHEME

Groups	Projects*								
	1	2	3	4	5	6	7	8	9
(A') Big eight firms and AICPA	11.1	44.4	33.3	44.4	66.7	66.7	55.6	33.3	66.7
(B') Sponsoring organizations	0	0	0	0	0	0	0	0	50
(C') Industry	40	70	40	80	10	30	40	80	90

\*See Appendix A for a listing of the projects.

All figures in the table are percentages.



Reporting by Oil and Gas Producing Companies" ((A') 66.7%, (B') 50%, and (C') 90%). For group (A'), the project with the lowest percentage of correct classification is SFAS No. 2, "Accounting for Research and Development Costs" (11.1%). For group (C'), it is the General Purchasing Power project (10%). For group (B'), completely incorrect classifications are made in eight of the nine projects.

As in the previous section, the descriptive statistics are self-explanatory. The overall averages of correctly classified respondents indicate a weak to moderate degree of distinctness for group (A'), the big eight public accounting firms and the AICPA, and group (C'), industry. Group (B'), the FASB sponsoring organizations other than the AICPA, exhibit minimal homogeneous characteristics.

FASB alignment for each of the projects is reported in Table 9. The table includes the values of the classification functions solved for the FASB, and the probabilities of FASB alignment with the groups. The classification functions are included in Appendix K.



TABLE 9  
FASB ALIGNMENT FOR THREE-GROUP CLASSIFICATION SCHEME

Groups	1	2	3	4	5	6	7	8	9
(A') Big eight firms and AICPA	.35(.77)	.72(.18)	.22(9.0)	.01(-5.7)	.00(-3.3)	.99(12.5)	.26(-.2)	.04(-1.5)	1.0(10.4)
(B') Sponsoring organizations	.46(.81)	.26(-1.1)	.01(5.7)	.01(-5.2)	.47(-1.6)	.01(5.1)	.67(.8)	.33(-.9)	.00(-1.0)
(C') Industry	.19(-.11)	.02(-3.6)	.77(13.2)	.98(-.2)	.53(-1.2)	.00(3.8)	.07(-1.5)	.63(-.6)	.00(1.3)

\*See Appendix A for a listing of the projects.

Key to the table:

- The underscored numbers indicate the FASB group alignment for that project.
- The numbers without parentheses are probabilities of FASB alignment with the groups.
- The numbers within the parentheses are values of the classification functions, as reported in Appendix K, for the FASB.



FASB group alignment varies across projects. Seven of the nine alignments are fairly distinct; the exceptions are SFAS No. 2, "Accounting for Research and Development Costs," and the general purchasing power project. The breakdown of the FASB alignment for the seven projects is as follows: group (A'), three projects (43%); group (B'), one project (14%); and group (C'), three projects (43%). These findings suggest that no consistent preference alignment exists between the FASB and any one of the three groups.

#### Summary and Comparison of the DA Results

In viewing the two-group and three-group DA results together, two conclusions are reached. They relate, respectively, to research questions one and three.

First, a moderate degree of group homogeneity, or distinctness, is represented by the two groups in the first classification scheme (groups (A) and (B)), and two of three groups in the second classification scheme (groups (A') and (C')). The majority of the respondents in groups (A) and (A') are the same respondents; it is not surprising, therefore, that a moderate degree of



group homogeneity is present in both classification schemes. Groups (B) and (C') are also made up of primarily the same respondents.

The second conclusion reached from the DA results concerns correlational evidence of FASB alignment with particular input preferences. For both classification schemes, no consistent pattern of FASB alignment is present. In fact, when viewing the two classification schemes together, FASB alignment is evenly split between the related groups of the two schemes discussed in the previous paragraph. The DA results indicate that, across the nine projects, a consistent alignment between FASB decisions and select group preferences does not exist.

The above conclusions are contrary to one of the overall conclusions of the Metcalf Report (1976b), as reported in Chapter 3. The staff of the Metcalf Report concluded that "strong influence" is exerted by the big eight public accounting firms and the AICPA. The DA results indicate that the preferences of those respondents and the FASB decisions are different as often as they are the same. In addition, preferences of the respondents are somewhat varied as indicated by only



moderate group homogeneity. Because of these findings, the conclusions of the Metcalf Report are subject to question. At a minimum, the DA results indicate further research is needed before accepting the conclusions of the Metcalf Report.

### Comparison of MDS and DA Results

In this dissertation, MDS and DA operate as complimentary techniques. The purpose of MDS techniques, as explained in Chapter 3, is to visually capture any data pattern or structure that is hidden in a raw set of empirical data. The data patterns can emerge through clustering, dimensional interpretation, or relationships among the data points. DA techniques, in a descriptive sense, are also used to determine any patterns, or structure, within a set of data. By specifying a potential structure within the data, DA techniques are used to test both the appropriateness of the structure, and the alignment of other data with the pre-determined structure. Since MDS and DA are used as complimentary techniques in this research, the results are expected to be similar.



The MDS results are reported in Chapter 4; the DA results are summarized in the previous section of this chapter. The techniques do, in fact, produce similar results. Both techniques indicate a moderate degree of preference homogeneity for two broad groups of respondents: preparers of financial statements, and attestors to financial statements. Other terms for the groups are industry and representational organizations (preparers), and public accounting firms and representational organizations (attestors). It appears that less preference homogeneity is reported by the MDS results for the preparer group than is reported for that group in the DA results. It is difficult to quantify the differences between the techniques, however. The homogeneity of the group preferences also connotes a moderate degree of distinctness between the groups. The distinctness of the groups varies widely, however, across the projects.

No other homogeneous groups are present based on similar preferences. The sponsoring organizations, a possible group, are widely dispersed in their preferences. Both techniques reveal almost no homogeneity of preferences among the five sponsoring organizations.



Finally, the techniques indicate similar findings regarding the FASB's relational position among the respondents. In the MDS maps, the majority of the time the FASB takes on an outlying position. This is interpreted as minimum similarity between the FASB's decisions and the preferences of many of the respondents. The DA results convey that no consistent alignment is present for any particular group over all the projects. While for any one project the FASB alignment is reported, the alignment is evenly split among the two groups of preparers and attestors. The techniques jointly refute any conclusion that the FASB's decisions consistently mirror either preparer or attestor preferences, as captured in this dissertation.

The second section details some of the limitations of the research. The limitations are related to the data base and the methodological techniques that are employed in analyzing the data. The third section includes a discussion of some alternative approaches to standards-setting research as a source for future research. An overview of the dissertation is provided in the final section of the chapter.



## Implications of Findings

### CHAPTER 6

fications for this research are presented in Chapter 1.

The first section of this chapter is titled "RESEARCH IMPLICATIONS AND LIMITATIONS, AND

in terms of SUGGESTIONS FOR FUTURE RESEARCH

The research findings of this dissertation are presented in Chapters 4 and 5. Because different methodologies are used to address similar research issues, Chapter 5 also includes a comparison of the results reported in the dissertation. The implications of those findings for standards-setting in accounting are discussed in the first section of the present chapter (6). The second section details some of the limitations of the research. The limitations are related to the data base and the methodological techniques that are employed in analyzing the data. The third section includes a discussion of some alternative approaches to standards-setting research as a source for future research. An overview of the dissertation is provided in the final section of the chapter.

always clear at the time the research is conducted.

Furthermore, theory acceptance may reveal "blind alley"



### Implications of Findings

Recall that three related, but different, justifications for this research are presented in Chapter 1. The implications of the research findings can be couched in terms of those justifications.

The research results constitute a description of relationships among certain parties involved in the process of setting accounting standards. If a clear-cut theory existed on setting standards in accounting, the descriptive results could represent either confirming or refuting evidence to that theory. But, accounting is lacking any dominant theory or theory consensus concerning the process of setting standards. Accounting is in a "pre-theory", or "between theory" stage.

The role of descriptive research, in a pre-theory setting, is to facilitate hypothesizing theories, confirming or refuting competing theories, and, ultimately, supporting acceptance of a particular theory. The process of theory acceptance, however, is long. Thus, the benefits of specific descriptive research are not always clear at the time the research is conducted. Furthermore, theory acceptance may reveal "blind alley"



characteristics of much descriptive research. The research of this dissertation has the same potential benefits and potential limitations of any descriptive research conducted in a pre-theory setting.

One approach to theorizing about financial accounting and the process of setting standards, as discussed in Chapter 2, is "information economics". The role of input preferences in that approach is important, but little is known about preference characteristics. The implementation of the information economics approach is greatly affected by the degree of preference diversity within the defined constituency base. Preference characteristics, however, are only a portion of the information needed in making the approach operational.

One major finding of this study is directly related to preference diversity. The statistical techniques indicate a moderate degree of preference homogeneity for two broad groups of respondents: preparers of financial statements and attestors to financial statements. The term, "moderate", should be emphasized because (1) the homogeneity of preferences within those groups is not perfect, and (2) the degree of preference



homogeneity varies from project to project. Nevertheless, the traditional assumption of complete preference diversity in information economics research may be incorrect. Cushing speculated on this assumption, as discussed in Chapter 1:

Our basic premise . . . has been that the assumption of complete diversity of tastes and beliefs among individuals, in society in general, and among financial statement users, in particular, may not be warranted (1977, p. 313).

The findings of this study are contrary to previous findings on preference homogeneity. Rockness and Nikolai (1977) and Pearson et al. (1979), concluded that there is little evidence to suggest preference homogeneity among public accounting firms. (Their findings are reviewed in Chapter 3.) In both studies, a significant majority of the public accounting firms researched were the big eight public accounting firms. An important distinction exists between those studies and the current research, however.

Rockness and Nilolai used APB votes as surrogates for the preferences of the firms. Pearson et al., used AudSEC votes in the same manner. This study extracts preference positions directly from submissions of the big



eight public accounting firms to the FASB. The relationship between voting decisions of a policy-maker and his/her firm's position is not clear. Speculation on that relationship is not necessary in this study because the positions of the accounting firms are public knowledge and presented directly by the firms to the FASB. It appears that the preference data base for this research is in a "purer" form than the voting data base used in previous research.

As stated earlier, implementation of the information economics approach is partially affected by the degree of preference diversity in a specified constituency base. Public accounting firms and industry represent only a portion of the FASB's constituency base because the FASB, at least ostensibly, has specified a large and diverse constituency base (SFAC No. 1, p. 11). Until more is known about the process of setting standards, and specifically, the role of constituency input in the process, it is difficult to assess the preference homogeneity findings. Public accounting firms and industry, however, have shown strong and continued participation in the process of setting standards. If these



participants are deemed important elements of the FASB constituency base, then preference characteristics of the participants should be of interest to the FASB. Furthermore, the diversity of their preferences is not as great as assumed in information economics research to date. The assumption of complete preference diversity, for potentially important elements of the FASB's constituency base, does not seem appropriate. In striving for implementation of the information economics approach, the assumption of complete preference diversity can be relaxed for these two constituency groups.

On a more pragmatic level, the findings are of interest to several policy bodies. On an ex post basis, the FASB is provided an overview analysis of a portion of its data base. The majority of FASB analyses are conducted separately for each project, and composite evaluations are generally not conducted.

The study also provides the FASB with relational information. This includes both relationships among respondents, and the FASB's position among the respondents. The MDS results would seem of particular interest to the FASB members. In the majority of the MDS maps,



the FASB takes on an outlying position among the respondents. The finding indicates that major differences exist between the FASB decisions and many of the respondents' preferences. If the MDS maps are accurate relational representations, it appears that the FASB turned away from many respondents' preferences to reach its decisions. The implications of this finding depends upon the importance attached to the respondents by the FASB. If the Board members view the respondents included in this study as important constituents, then the outlying position of the FASB should be of concern. As discussed in the next section, certain limitations of the research design constrain interpretation of the results.

The U.S. House of Representatives and the U.S. Senate have recently shown an interest in accounting standards-setting, and the dissertation findings may be of interest to those policy bodies. Specifically, the second classification scheme used in the DA techniques is directly related to the Moss (1976a) and Metcalf (1976b) Reports. As reported in Chapter 3, Congress appears concerned with the relationship between (1) the big eight public accounting firms and the AICPA, and (2) the FASB.



Both reports conclude that the FASB decision-making process is unduly influenced by the preferences of the big eight firms and the AICPA. In other words, the FASB does not operate as an independent policy body.

The results of this study contradict the conclusions of the Moss and Metcalf Reports. Across the nine projects analyzed, a consistent alignment between FASB decisions, and the big eight public accounting firms and the AICPA preferences, does not exist. The MDS results are consistent with the DA results in refuting the reports' conclusions.

The conclusions of the Congressional reports, to some extent, have negatively impacted the FASB's viability as a policy body. The past effect of the reports on the FASB cannot be changed. Based on this study, however, the conclusions of the reports do not appear appropriate.

#### Data and Methodological Limitations

One broad limitation constrains interpretations of the research findings: only correlational evidence is generated. The research techniques provide correlations between certain FASB decisions and respondent preferences;



the techniques do not address, however, the reasoning of the FASB in reaching its decisions. In methodological parlance, correlational evidence, not casual evidence, is reported in this study. Additional limiting features in the research design relate to the data base and the methodologies.

As detailed in Chapter 3, the data base is a portion of the FASB public record for nine primary projects already completed by the Board. The research findings are limited to that base. By narrowing the set of responses analyzed to submissions of twenty-seven individuals, firms, and representational organizations, a large number of responses are ignored. Furthermore, the majority of the twenty-seven respondents provide submissions to the FASB at all stages in the life of a project; this study emphasizes only discussion memorandum responses, with one exception. The data base constitutes a subset of the complete FASB public record.

Certain methodological limitations are also present. A degree of subjectivity is involved in interpreting the MDS maps. For that reason, researchers, such as Green (1975, p. 26), recommend complimentary tech-

the DA techniques.



techniques be employed to facilitate interpretation of the maps. Both cluster analysis and discriminant analysis operate as complimentary techniques in this study. The degree of subjectivity in the MDS analysis is also affected by the quantity and diversity of respondent characteristics (Appendix B). Relatively little information is available on each respondent. Because of limited information, the subjectivity factor increases. Certain relationships among the respondents may remain uninterpreted by the researcher. Unfortunately, this limitation is not overcome in analyzing the MDS maps.

Two basic assumptions underlie DA as a statistical technique: (1) the independent variables (policy questions) have been drawn from a multivariate normal population, and (2) within-group covariation and dispersion of the variables are equal across groups (Boatsman, 1973, pp. 104-105). In some cases, these assumptions are violated. Gilbert (1968 & 1969) and Eisenbeis and Avery (1972), among others, have suggested the severity of the assumption violations to the statistical results may not be great. More importantly, the consistency of the MDS and DA results add credence to the validity of the DA techniques.



As an example, the MDS map for SFAS No. 5 (Figure 8) reveals (1) a strong preparer/attestor distinction, and (2) FASB alignment with attestor respondents. The DA results for that project, as reported in Table 7, also indicate a strong FASB alignment with the attestor group. Furthermore, the attestor and preparer groups are fairly distinct for that project, as reported in Table 6. The consistency between MDS and DA results is present in almost all the projects.

#### Suggestions for Future Research

In conducting an extensive research project, the researcher almost inevitably becomes aware of the limitations and alternative approaches to the project. In many cases, the alternative approaches constitute replications, or extensions, of the current project. A few suggestions for future research are discussed below.

An obvious extension of this research involves a descriptive analysis of a different portion of the FASB public record. For example, preferences could be extracted and analyzed from exposure draft responses of the same twenty-seven respondents used in this study. In comparing those findings to this study, a time dimension



for preference homogeneity could be determined. As another example, one or more projects could be analyzed in depth to discern the relationships among more diverse respondents. To generalize, the same methodological techniques could be applied to a different portion of the FASB public record.

As discussed in the limitations section of this chapter, correlational relationships between inputs (respondents' positions) and outputs (FASB decisions) are reported in this study. To move from correlational to casual relationships, research must be conducted on actual Board member decision-making. The standards-setting process involves inputs that are filtered through the Board members before the output decisions are made. The factors important to the Board members in making policy decisions can be determined only through a behavioral analysis of Board deliberations. Similar research has been conducted in public policy areas, and could be applied in an accounting setting.

Many other research possibilities exist, mainly because of the newness of standards-setting research in accounting. Two disciplines in particular, political



science and public economics or finance, historically have generated substantial policy research. Research approaches employed in those disciplines could be attempted in an accounting context because of the similarities between standards-setting in the public and private sectors of society.

#### Overview of the Dissertation

Two findings of this dissertation are worth reemphasizing. Within the accounting community, many differences among the big eight public accounting firms seem to be well-documented. The differences relate to such items as optimal reporting practices, regulation of the profession, and auditing techniques. It is interesting and surprising, therefore, that the findings indicate a moderate degree of preference homogeneity exists among the firms.

The FASB alignment among the respondents is also of particular interest. The correlational evidence strongly refutes any notion that the FASB is consistently voting a certain "constituency line." In the accounting community, this finding is probably not surprising. Outside the accounting community, however, this finding may



be surprising because it is a direct refutation of the conclusions of the Moss and Metcalf Reports.

The process of setting standards, as a researchable area in accounting, is an outgrowth of the changing views on accounting information. The dearth of policy research, however, leaves the researcher in a difficult situation. Little guidance is available for choosing optimal research techniques. In addition, few research results are available to ignite ideas for future research.

APPENDICES

This study attempts to provide meaningful descriptive research. The need for standards-setting research makes the methodologies employed in such research as important as the actual findings. Hopefully, the methodologies used in this dissertation are extensively analyzed by other researchers; in that way, either the techniques will become viable research tools, or they will be discarded for better tools developed in the critique of this study.



## APPENDIX A\*

## Project Data

1. SFAS No. 2, "Accounting for Research and Development Costs," October 1974

DM--Accounting for Research and Development and Similar Costs, issued December 30, 1973 (73)

PH--Held on March 15, 1974 (14)

ED--Accounting for Research and Development Costs, issued June 5, 1974 (158)

2. SFAS No. 5, "Accounting for Contingencies," March 1975

## APPENDICES

DM--Accounting for Future Losses, issued March 13, 1974 (87)

PH--Held on May 13, 1974 (16)

ED--Accounting for Contingencies, issued October 21, 1974 (212)

3. SFAS No. 8, "Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements," October 1975

DM--Accounting for Foreign Currency Translation, issued February 21, 1974 (90)

PH--Held on June 10 and 11, 1974 (115)

ED--Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements, issued December 31, 1974 (190)

\*See the notes to the appendix at its conclusion to understand the contents.



## APPENDIX A\*

## Project Data

1. SFAS No. 2, "Accounting for Research and Development Costs," October 1974

DM--Accounting for Research and Development and Similar Costs, issued December 28, 1973 (74)

PH--Held on March 15, 1974 (14)

ED--Accounting for Research and Development Costs, issued June 5, 1974 (168)

2. SFAS No. 5, "Accounting for Contingencies," March 1975

DM--Accounting for Future Losses, issued March 13, 1974 (87)

PH--Held on May 13, 1974 (18)

ED--Accounting for Contingencies, issued October 21, 1974 (212)

3. SFAS No. 8, "Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements," October 1975

DM--Accounting for Foreign Currency Translation, issued February 21, 1974 (90)

PH--Held on June 10 and 11, 1974 (15)

ED--Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements, issued December 31, 1974 (190)

\*See the notes to the appendix at its conclusion to understand the contents.



4. SFAS No. 12, "Accounting for Certain Marketable Securities," December 1975

DM--None issued

PH--Held on December 8, 1975, based on the exposure draft (20)

ED--Accounting for Certain Marketable Securities, issued November 6, 1975 (272)

5. Financial Reporting in Units of General Purchasing Power, FASB announced decision not to issue statement in June 1976

DM--Reporting the Effects of General Price-Level Changes in Financial Statements, February 15, 1974 (139)

PH--Held April 23 and 24, 1974 (23)

ED--Financial Reporting in Units of General Purchasing Power, issued December 31, 1974 (470)

6. SFAS No. 13, "Accounting for Leases," November 1976

DM--Accounting for Leases, issued July 2, 1974

PH--Held November 18-21, 1974 (32)

ED--Accounting for Leases, August 26, 1975 (250)

ED--Accounting for Leases, re-exposed July 22, 1976 (282)

7. SFAS No. 14, "Financial Reporting for Segments of a Business Enterprise," December 1976

DM--Financial Reporting for Segments of a Business Enterprise," May 22, 1974 (144)

PH--Held on August 1 and 2, 1974 (21)

Source: FASB documents, either DMs, EDs, or Final Statements



ED--Financial Reporting for Segments of a Business Enterprise, September 30, 1975 (233)

8. SFAS No. 15, "Accounting by Debtors and Creditors for Troubled Debt Restructurings," June 1977

DM--Accounting by Debtors and Creditors When Debt is Restructured, May 11, 1976 (894)

PH--Held July 27-30, 1976 (37)

ED--Accounting by Debtors and Creditors for Troubled Debt Restructurings," December 30, 1976 (96)

9. SFAS No. 19, "Financial Accounting and Reporting by Oil and Gas Producing Companies," December 1977

DM--Financial Accounting and Reporting in the Extractive Industries, December 23, 1976 (140)

PH--Held on March 30 and 31 and April 1 and 4, 1977 (39)

ED--Financial Accounting and Reporting by Oil and Gas Producing Companies, July 15, 1977 (195)

---

#### Key to the Appendix

Abbreviations: DM--discussion memorandum

PH--public hearing

ED--exposure draft

Public response: The numbers parenthetical to the dates indicate the number of letters of comment received by the FASB on DMs and EDs, and the number of oral presentators at the PHs.

Source: FASB documents, either DMs, EDs, or final Statements



Members: 15,000  
Staff: 18

## APPENDIX B

### Respondent Information

#### Big Eight Public Accounting Firms (1-8)

1. Arthur Andersen & Co.
2. Arthur Young & Co.
3. Coopers & Lybrand
4. Ernst & Ernst (currently Ernst & Whinney)
5. Haskins & Sells (currently Deloitte, Haskins & Sells)
6. Price Waterhouse & Co.
7. Peat, Marwick, Mitchell & Co.
8. Touche Ross & Co.

#### Sponsoring Organizations (9-13)

9. American Accounting Association  
Teachers and practitioners of accounting.  
Members: 15,000  
Staff: 7
10. American Institute of CPAs  
Professional society of accountants certified  
by the states and territories.  
Members: 136,000  
Staff: 422
11. Financial Executives Institute  
Professional organization of financial and  
management executives performing duties of  
a controller, treasurer, or vice-president-  
finance.  
Members: 10,100  
Staff: 38
12. Financial Analysts Federation  
Federation of security and financial analyst  
societies whose members are practicing  
investment analysts.



19. Shell Members: 15,000  
Staff: 18
13. National Association of Accountants  
Management accountants in industry.  
Members: 84,000  
Staff: 93
- 
14. Arizona Society of CPAs  
State society of certified public accountants.  
Members: 1,517  
Staff: 3
15. District of Columbia Institute of CPAs  
Society of certified public accountants.  
Members: 1,621  
Staff: 3
16. The New York State Society of CPAs  
State society of certified public accountants.  
Members: 23,000  
Staff: 55
17. National Electrical Manufacturers Association  
Manufacturers of equipment and apparatus used  
for the generation, transmission, distribu-  
tion and utilization of electric power.  
Members: 560  
Staff: 100
18. General Motors Corporation  
Corporation engaged in the manufacture,  
assembly, and distribution of various motor-  
driven products, most of which relate to  
transportation equipment.  
Sales: \$63,221,100,000  
Net income: \$3,508,000,000  
Total assets: \$30,598,300,000  
Auditors: Deloitte, Haskins and Sells



19. Shell Oil Company  
 Corporation engaged in the acquisition and development of oil and gas lands, in production, purchase, sale, transportation and refining of crude oil, and transportation and marketing of its products.  
 Sales: \$11,949,563,000  
 Net income: \$813,623,000  
 Total assets: \$10,453,358,000  
 Auditors: Price Waterhouse & Co.
20. American Cyanamid Co.  
 Corporation engaged in manufacture and sale of a highly diversified line of agricultural, medical, specialty chemical, consumer and formica products.  
 Sales: \$2,745,745,000  
 Net income: \$155,943,000  
 Total assets: \$2,526,149,000  
 Auditors: Peat, Marwick, Mitchell & Co.
21. E.I. duPont de Nemours & Co.  
 Principal manufacturer of chemical products in the following departments: biochemicals, fabrics and finishes, chemicals, dyes, and pigments; petrochemicals, plastic products and resins; and textile fibers.  
 Sales: \$10,584,200,000  
 Net income: \$787,000,000  
 Total assets: \$8,070,000,000  
 Auditors: Price Waterhouse & Co.
22. Aetna Life & Casualty Company  
 Insurance and financial service organization marketing virtually all forms of insurance, bonds and pension products on individual and group bases.  
 Sales: \$9,453,704,000 (premium and investment revenue)  
 Net income: \$501,775,000  
 Total assets: \$24,268,190,000  
 Auditors: Peat, Marwick, Mitchell & Co.



## 23. General Electric Company

Corporation engaged in developing, manufacturing and marketing a wide variety of products for the generation, transmission distribution, control, and utilization of electricity and related technologies.

Sales: \$19,653,800,000

Net income: \$1,229,700,000

Source for Total assets: \$15,036,000,000

Auditors: Peat, Marwick, Mitchell & Co.

## 24. Exxon Corporation

Corporation engaged in exploring for and producing crude oil and natural gas from lands owned, leased, or held under concession; in petroleum and chemical manufacturing, and in transporting and selling crude oil, natural gas, and petroleum and chemical products.

Sales: \$57,529,219,000

Net income: \$2,443,110,000

Total assets: \$38,436,949,000

Auditors: Price Waterhouse & Co.

## 25. Marcor Inc. (wholly-owned subsidiary of Mobil Corp. since 1976)

Corporation engaged in merchandising and packaging, with certain subsidiaries engaged in miscellaneous activities.

Sales: \$5,014,000,000

Net income: \$105,000,000

Total assets: \$3,569,000,000

Auditors: Arthur Andersen & Co.

## 26. W.R. Grace &amp; Co.

Major industrial company with product interest in three major areas: chemically-based products and services, consumer products and services, and natural resources.

Sales: \$4,309,588,000

Net income: \$170,403,000

Total assets: \$3,268,438,000

Auditors: Price Waterhouse & Co.



27. John A. Grady  
 Director, Bureau of Accounts, Interstate  
 Commerce Commission, a government regulatory  
 agency. Views stated are personal beliefs  
 and not necessarily those of the ICC.

---

Source for Appendix information:

<u>Respondent</u>	<u>Source</u>
9,10,11,12,13,17	<u>Encyclopedia of Associations.</u> vol. 1. Nancy Yakes and Denise Akey, eds. Gale Research Co.: Detroit, 1979.
14,15,16	Personal communications.
18,19,20,21,22, 23,24,26	Descriptions: <u>Moody's</u> <u>Industry Manual</u> , 1978 Financial figures: Annual reports, all with years ending 12/31/78.
25	Mobil Corporation 12/31/78 SEC 10-K filing.
27	Letters of comment by Grady.

\*See Table 1 for respondent abbreviations.

\*\*See Appendix A for assignment of subjects to projects.



## APPENDIX D

## Policy Questions

## Research and Development Costs

## APPENDIX C

1. Should comparable guidelines be prescribed for determining Letters of Comment by Respondents entities associated in the R&D process of all to industry discretion or industry guidelines within broad (as)?

Respondents*	Projects**								
	1	2	3	4	5	6	7	8	
AA&Co.	25	57	65	64	98	139	92	412	46
AY&Co.	--	63	81	156	39	224	108	852	101
C&L	48	68	80	144	108	271	--	820	130
E&E	15	67	60	147	480	221	67	499	132
H&S	30	23	67	30	64	245	69	853	120
PW&Co.	19	19	--	42	36	5	35	455	49
PM&Co.	33	59	62	161	73	190	44	449	83
TR&Co.	49	37	47	43	90	--	102	854	99
AAA	--	--	73	197	114	114	19	894	59
AICPA	39	24	26	101	46	79	63	717	92
FEI	56	20	42	79	93	157	97	289	--
FAF	14	46	77	170	111/112	266	115	409	104
NAA	16	62	38	165	107	168	11	406	137
ASCPA	--	54	61	104	51	60	140	427	--
DCICPA	24	27	--	187	88	57	90	870	102
NYSCPA	66	43	66	172	77	104	104	890	107
NEMA	20	56	51	93	83	185	96	--	--
GM	--	21	59	168	101	288	105	731	--
Shell	26	14	76	173	72	250	66	411	34
ACyanimid	32	61	84	52	91	223	101	589	135
duPont	50	80	82	--	128	--	109	739	105
Aetna	47	41	68	100	84	215	49	472	--
GE	54	6	54	57	85	204	91	447	--
Exxon	57	38	41	--	53	179	131	793	40
Marcor	62	17	10	111	33	--	103	685	--
WRGrace	--	12	70	177	52	286	37	--	110
Grady	38	69	--	121	125	289	130	496	--

\*See Table 1 for respondent abbreviations.

\*\*See Appendix A for assignment of numbers to projects.

3. Should accrual of future losses from pending or threatened litigation be allowed in advance of their occurrence?

9. Should standards be set for the disclosure of non-accrable future losses in the financial statements?



## APPENDIX D

## Policy Questions

Research and Development Costs

1. Should comparable guidelines be prescribed for determining research and development costs of all entities encompassed in the final standard (as opposed to industry discretion or industry guidelines within broad guidelines)?

2. Should indirect costs be identified with research and development costs?

3. Should all research and development costs be immediately expensed when incurred?

4. Should research and development costs be separately disclosed and presented in financial statements?

Contingencies

5. Should accrual of future self-insured losses be allowed in advance of their occurrence?

6. Should accrual of future losses from expropriation by foreign governments be allowed in advance of their occurrence?

7. Should accrual of future catastrophe losses of property and casualty insurance companies be allowed in advance of their occurrence?

8. Should accrual of future losses from pending or threatened litigation be allowed in advance of their occurrence?

9. Should standards be set for the disclosure of non-accruable future losses in the financial statements?



Foreign Currency Transactions and Statements

10. Should an entity's commitment to purchase or receive foreign currency be viewed as a separate transaction from the purchase or sale of goods or services (as opposed to the one-transaction perspective, or no gain or loss recognized)?

11. Should exchange adjustments be recorded when exchange rate changes occur (as opposed to date of settlement of the payable or receivable)?

12. Should the reporting currency of the parent company be used for financial statements of foreign entities when included in the financial statements of the parent company?

13. Should inventories of foreign entities be adjusted for changes in exchange rates between the local currencies of the foreign entities and the reporting currency of the parent company (or use current rates)?

14. Should fixed assets of foreign entities be adjusted for changes in exchange rates between the local currencies of the foreign entities and the reporting currency of the parent company (or use current rates)?

15. Should long-term liabilities of foreign entities be adjusted for changes in exchange rates between the local currencies of the foreign entities and the reporting currency of the parent company (or use current rates)?

16. Should deferred income taxes of foreign entities be adjusted for changes in exchange rates between the local currencies of the foreign entities and the reporting currency of the parent company (or use current rates)?

17. Should preferred stock (of a permanent nature) of foreign entities be adjusted for changes in exchange rates between the local currencies of the foreign entities and the reporting currency of the parent company (or use current rates)?



### Marketable Securities

18. Should marketable equity securities be written down if the current market value is below historical cost?

19. For the purpose of comparing cost and current market value, should all marketable equity securities, irrespective of balance sheet classification, be treated as a single portfolio of assets?

20. Should marketable equity securities that have been written down be written back up (and included in current income) based on market recoveries?

21. In setting accounting policy, should a distinction be made between industries that have specialized accounting practices for marketable equity securities, and those that do not?

### General Purchasing Power Accounting

22. Should reporting of the effects of general purchasing power changes be required as supplemental information to the conventional historical-dollar financial statements?

23. Should a requirement for presentation of purchasing power adjusted financial information apply to all business entities (excluding not-for-profit entities)?

24. Is the Gross National Product Implicit Price Deflator the most appropriate measure of changes in the general purchasing power in the United States?

25. Should amounts in general purchasing power financial statements be stated in terms of dollars of purchasing power at the end of the current accounting period (as opposed to some other base period)?



26. Are the criteria for distinguishing between monetary and nonmonetary items as set forth in APB Statement No. 3 appropriate?

27. Should all general purchasing power gains and losses which result from holding monetary assets and liabilities be included in the determination of current net income?

28. Should general purchasing power financial statements of earlier periods be restated in terms of current period purchasing power when such earlier financial statements are presented for comparative purposes?

#### Leases

29. Should leases which are in substance installment purchases be capitalized?

30. Should leasing agreements whose terms give rise to debt in the strict legal sense be recorded as liabilities?

31. Does footnote disclosure represent a satisfactory alternative to lease capitalization in fulfilling users' needs for information concerning leasing transactions?

32. Should accounting for leases by lessees and lessors be symmetrical?

33. Should leases which are the equivalent of sales be accounted for as such by the lessor?

34. Should manufacturer or dealer lessors be permitted to recognize a proportionate share of their profit with respect to some leases which are not the equivalent of sales?

35. Should leases which are considered to be financing arrangements for the purchase of property be identified by the same criteria as those which are considered equivalent to sales of property?



36. Are leveraged leases unique in the sense that special accounting standards are required to recognize their economic nature?

#### Segmental Reporting

37. Should information about segments of a business enterprise be included in financial statements?

38. Should the FASB specify guidelines for segmentation (as opposed to the entity determining the best segmentation)?

39. Related to the income statement, should some measure of segment income be reported (as opposed to revenue information only)?

40. Related to the balance sheet, should selected segment information (e.g., property, inventories, etc.) be reported?

41. Should selected segment information related to the statement of changes in financial position be reported?

42. Should a requirement for inclusion of segment information in financial statements be made applicable to only certain profit-oriented business enterprises?

#### Restructured Debt Accounting

43. When there is satisfaction of a receivable or debt by forgiveness, should the remaining balance be accounted for at historical entry value (as opposed to some form of current value) by both the creditor and debtor?

44. When there is satisfaction of a receivable or debt in whole or in part by transfer of receivables, real estate, or other assets, should the remaining balance



be accounted for at historical entry value (as opposed to some form of current value) by both the debtor and creditor?

45. When new evidence of debt is issued for outstanding (old) debt and there is a change in the stated maturity amount of the debt, should the new debt be valued at the historical value of the old debt by both the debtor and creditor?

47. When there is a change in the amount or timing of cash payments of outstanding debt without a change in the stated maturity of the debt, should the restructured debt be valued at the historical value of the old debt by both the debtor and the creditor?

#### Extractive Industry Accounting

48. In determining the costs that should be capitalized or expensed, should an association be made between costs and minerals discovered and developed?

49. Should the FASB adopt accounting policies conceptually similar to successful efforts costing (as opposed to full costing)?

50. Should SFAS Statement No. 9, "Accounting for Income Taxes--Oil and Gas Producing Companies," be readdressed in connection with the current project?

51. Should the traditional historical cost basis financial statements be supplemented by financial statements in which reserves are valued on some basis other than historical cost?



APPENDIX E

Preference Positions

	—Policy Questions—																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
AA&Co.	Y	Y	Y	Y	N	N	NE	N	Y	N	Y	Y	Y	N	Y	NE	NE
AY&Co.	NE	NE	NE	NE	N	N	N	N	Y	Y	Y	N	Y	Y	Y	Y	Y
C&L	N	Y	N	Y	Y	N	Y	NE	N	Y	Y	NE	Y	Y	Y	Y	Y
E&E	N	NE	N	Y	NE	NE	N	NE	Y	Y	Y	Y	Y	N	Y	NE	N
H&S	NE	Y	Y	Y	Y	N	Y	NE	Y	Y	Y	Y	Y	Y	Y	Y	Y
PW&Co.	NE	Y	Y	Y	NE	N	Y	NE	N	NE	NE	NE	NE	NE	NE	NE	NE
PMM&Co.	Y	Y	Y	Y	N	Y	N	N	Y	Y	Y	Y	Y	N	Y	N	N
TR&Co.	NE	N	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
AAA	NE	NE	NE	NE	NE	NE	NE	NE	NE	Y	Y	NE	Y	Y	Y	Y	Y
AICPA	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	N
FEI	NE	Y	N	Y	Y	Y	Y	Y	NE	Y	Y	Y	Y	N	Y	N	N
FAF	NE	Y	Y	Y	N	N	N	N	Y	NE	Y	NE	NE	NE	NE	NE	NE
NAA	NE	Y	Y	Y	Y	Y	NE	N	Y	Y	N	NE	Y	N	Y	NE	N
ASCPA	NE	NE	NE	NE	Y	N	NE	N	NE	N	Y	Y	N	N	Y	NE	NE
DCICPA	NE	Y	N	NE	NE	N	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
NYSCPA	N	Y	N	Y	N	N	N	NE	Y	Y	Y	NE	Y	N	Y	Y	NE
NEMA	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	NE	Y	NE	NE	Y	NE
GM	NE	NE	NE	NE	Y	Y	Y	Y	N	Y	Y	Y	NE	NE	Y	N	N
Shell	NE	Y	N	Y	Y	N	Y	N	Y	Y	Y	Y	Y	N	Y	NE	N
ACyanimid	N	NE	Y	NE	Y	N	NE	NE	NE	Y	N	Y	Y	Y	Y	Y	N
duPont	NE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	NE	NE
Aetna	N	Y	N	Y	Y	Y	Y	N	N	Y	Y	Y	Y	N	Y	Y	Y
GE	Y	Y	Y	Y	Y	Y	NE	Y	Y	Y	Y	Y	Y	N	Y	Y	NE
Exxon	NE	Y	N	Y	Y	Y	Y	NE	Y	Y	Y	NE	NE	NE	Y	N	N
Marcor	N	Y	Y	N	NE	N	NE	NE	NE	Y	NE	Y	NE	N	Y	Y	N
WRGrace	NE	NE	NE	NE	Y	N	NE	Y	Y	N	Y	Y	Y	N	Y	Y	N
Grady	NE	NE	Y	NE	N	N	Y	NE	Y	NE	NE	NE	NE	NE	NE	NE	NE
FASB	Y	Y	Y	Y	N	N	N	N	Y	Y	Y	Y	N	N	Y	NE	N

Y--yes

N--no

NE--neutral or no response



## APPENDIX E (Continued)

	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
—Policy Questions—																	
AA&Co.	Y	Y	NE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N
AY&Co.	N	NE	N	N	Y	N	Y	Y	N	Y	Y	Y	Y	N	N	Y	Y
C&L	N	N	N	NE	Y	N	Y	Y	NE	Y	Y	N	N	N	N	Y	N
E&E	NE	N	N	NE	Y	N	Y	Y	N	Y	Y	Y	Y	N	Y	Y	N
H&S	NE	NE	N	NE	Y	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N
PW&Co.	Y	Y	NE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
PMM&Co.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N
TR&Co.	Y	Y	NE	Y	Y	N	N	N	N	N	N	NE	NE	NE	NE	NE	NE
AAA	Y	Y	Y	Y	Y	Y	Y	Y	NE	NE	Y	Y	Y	N	Y	NE	NE
AICPA	Y	Y	Y	NE	Y	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N
FEI	NE	NE	N	NE	Y	Y	Y	N	Y	Y	N	Y	Y	N	N	Y	N
FAF	N	NE	NE	NE	N	N	N	N	N	N	N	Y	Y	N	Y	Y	N
NAA	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
ASCPA	Y	Y	Y	NE	Y	Y	Y	Y	N	Y	Y	NE	NE	N	Y	NE	NE
DCICPA	Y	Y	Y	NE	N	N	N	N	N	N	N	Y	N	NE	Y	NE	NE
NYSCPA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	NE	NE
NEMA	NE	NE	NE	NE	NE	Y	Y	N	Y	Y	N	NE	Y	NE	Y	NE	NE
GM	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	NE	NE
Shell	N	N	N	N	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N	Y	N
ACyanimid	Y	Y	Y	Y	N	N	N	N	N	N	N	NE	NE	NE	NE	NE	NE
duPont	NE	NE	NE	NE	Y	Y	Y	N	N	Y	N	NE	NE	NE	NE	NE	NE
Aetna	NE	NE	NE	Y	N	N	N	N	N	N	N	Y	NE	NE	Y	Y	Y
GE	Y	Y	Y	Y	Y	N	Y	N	N	Y	N	Y	N	N	Y	Y	N
Exxon	NE	NE	NE	NE	Y	N	N	Y	Y	Y	Y	Y	Y	N	Y	Y	N
Marcor	Y	Y	Y	Y	Y	N	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
WRGrace	Y	Y	Y	Y	N	N	N	N	N	N	N	Y	NE	N	NE	NE	NE
Grady	N	N	NE	NE	Y	N	Y	Y	NE	Y	Y	Y	Y	N	Y	Y	N
PASB	Y	N	Y	Y	N	N	N	N	N	N	N	Y	Y	N	Y	Y	Y



## APPENDIX E (Continued)

	—Policy Questions—																	
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	
AA&Co.	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	NE	Y	N	Y	Y	Y
AY&Co.	NE	NE	Y	Y	Y	NE	N	Y	NE	NE	NE	NE	NE	Y	Y	Y	Y	Y
C&L	Y	Y	NE	NE	NE	NE	NE	NE	Y	N	N	Y	Y	Y	Y	Y	NE	N
E&E	Y	N	Y	N	Y	N	N	N	NE	N	N	NE	NE	Y	NE	Y	N	N
H&S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	N
PW&Co.	N	N	Y	Y	Y	N	N	Y	Y	Y	N	Y	Y	NE	N	Y	N	N
PMM&Co.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	Y	Y	N
TR&Co.	NE	NE	Y	N	Y	Y	Y	N	N	N	N	N	N	NE	N	Y	Y	NE
AAA	NE	NE	Y	N	Y	Y	Y	Y	Y	N	N	Y	NE	Y	NE	Y	Y	N
AICPA	Y	Y	Y	Y	Y	N	N	Y	NE	N	N	NE	NE	Y	NE	NE	NE	NE
FEI	Y	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	N	Y	Y	NE	NE
FAP	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N	Y	Y	NE	NE
NAA	NE	NE	Y	NE	Y	N	N	N	N	N	N	N	N	NE	Y	N	N	N
ASCPA	NE	NE	Y	N	Y	Y	N	NE	N	N	N	N	N	NE	NE	NE	NE	NE
DCICPA	Y	N	Y	N	Y	Y	Y	N	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
NYSCPA	Y	Y	Y	Y	Y	N	N	N	Y	N	N	N	Y	Y	NE	NE	NE	NE
NEMA	NE	NE	N	N	Y	N	N	N	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
GM	NE	NE	N	N	Y	N	N	N	NE	NE	NE	NE	NE	NE	NE	NE	N	N
Shell	Y	Y	Y	N	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	N	N
ACyanimid	NE	NE	Y	Y	Y	N	N	N	Y	N	N	Y	Y	Y	Y	N	N	N
duPont	NE	NE	N	N	Y	N	N	Y	NE	Y	Y	NE	NE	NE	NE	NE	NE	NE
Aetna	Y	Y	NE	N	Y	N	N	N	Y	Y	Y	Y	Y	NE	NE	NE	NE	NE
GE	Y	Y	N	N	NE	N	N	Y	NE	Y	Y	Y	Y	NE	NE	NE	NE	NE
Exxon	Y	NE	Y	N	Y	Y	Y	N	NE	NE	NE	NE	NE	Y	NE	Y	Y	Y
Marcor	NE	NE	Y	N	N	Y	Y	N	Y	N	N	Y	Y	NE	NE	NE	NE	NE
WRGrace	NE	N	Y	N	Y	Y	Y	Y	NE	NE	NE	NE	NE	Y	Y	N	N	N
Grady	Y	Y	Y	Y	Y	Y	Y	NE	Y	N	N	Y	Y	NE	NE	NE	NE	NE
FASB	N	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	N	N



## APPENDIX F

## Pair-wise Comparison Matrices

## Key to Matrices:

## Comparison Members

1. Arthur Andersen & Co.
2. Arthur Young & Co.
3. Coopers & Lybrand
4. Ernst & Ernst
5. Haskins & Sells
6. Price Waterhouse & Co.
7. Peat, Marwick, Mitchell & Co.
8. Touche Ross & Co.
9. American Accounting Association
10. American Institute of CPAs
11. Financial Executives Institute
12. The Financial Analysts Federation
13. National Association of Accountants
14. Arizona Society of CPAs
15. District of Columbia Institute of CPAs
16. The New York State Society of CPAs
17. National Electric Manufacturers Association
18. General Motors Corporation
19. Shell Oil Company
20. American Cyanamid Co.
21. E.I. duPont de Nemours & Co.
22. Aetna Life & Casualty
23. General Electric Company
24. Exxon Corporation
25. Marcor Inc.
26. W.R. Grace & Co.
27. John A. Grady
28. FASB

## Policy questions:

See Appendix D for listing of policy questions.























































































[illegible]

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28



































[illegible]

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

[illegible]















































































Policy Question #51

1	1	5	9	9	9	5	9	5	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
2	5	9	9	9	9	5	9	5	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
3	5	5	5	5	1	5	1	1	1	5	1	1	1	5	5	1	1	5	1	5	1	5	1	5	5
4	1	1	5	1	5	5	5	1	5	5	5	5	5	1	1	5	5	5	9	5	1	5	1	5	5
5	1	1	5	1	5	5	5	1	5	5	5	5	5	1	1	5	5	5	9	5	1	5	1	5	5
6	1	5	1	5	5	5	1	5	5	5	5	5	5	1	1	5	5	5	9	5	1	5	1	5	5
7	5	1	5	5	5	1	5	5	5	5	5	5	5	1	1	5	5	5	9	5	1	5	1	5	5
8	5	1	1	1	5	1	1	1	1	1	5	5	1	1	1	5	1	1	5	1	5	1	5	5	5
9	5	5	5	5	1	5	1	1	1	1	5	5	1	1	1	5	5	1	1	5	1	5	1	5	5
10	5	9	9	9	9	5	9	5	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
11	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
12	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
13	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
14	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
15	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
16	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
17	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
18	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
19	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
20	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
21	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
22	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
23	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
24	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
25	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
26	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
27	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9
28	1	5	9	9	9	9	5	9	5	5	9	5	5	5	5	9	9	5	5	5	1	5	9	5	9



## APPENDIX G

## MDS Input Matrices

## Key to Matrices:

## Comparison Members

1. Arthur Andersen & Co.
2. Arthur Young & Co.
3. Coopers & Lybrand
4. Ernst & Ernst
5. Haskins & Sells
6. Price Waterhouse & Co.
7. Peat, Marwick, Mitchell & Co.
8. Touche Ross & Co.
9. American Accounting Association
10. American Institute of CPAs
11. Financial Executives Institute
12. The Financial Analysts Federation
13. National Association of Accountants
14. Arizona Society of CPAs
15. District of Columbia Institute of CPAs
16. The New York State Society of CPAs
17. National Electrical Manufacturers Association
18. General Motors Corporation
19. Shell Oil Company
20. American Cyanamid Co.
21. E.I. duPont de Nemours & Co.
22. Aetna Life & Casualty
23. General Electric Company
24. Exxon Corporation
25. Marcor Inc.
26. W.R. Grace & Co.
27. John A. Grady
28. FASB

## Input Matrices

See Table 4 for the policy questions making up the matrices.







Pair-wise Comparison Matrix # 2

Contingencies

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1																											
2	2.4																										
3	6.5	7.3																									
4	4.5	3.9	6.5																								
5	5.1	6.5	4.1	5.2																							
6	5.6	6.5	2.4	6.1	4.7																						
7	4.7	4.1	8.4	3.9	7.3	7.3																					
8	4.7	4.1	7.3	3.9	6.1	6.5	5.7																				
9	4.5	5.0	4.5	3.3	4.5	3.9	5.0	5.0																			
10	6.1	5.7	8.3	3.9	7.3	7.6	4.1	4.1	5.0																		
11	7.6	8.3	5.2	6.0	5.1	5.6	7.3	7.3	4.5	6.1																	
12	2.4	1.0	7.3	3.9	6.1	6.5	4.1	4.1	5.0	5.7	8.3																
13	5.7	6.1	6.5	4.5	5.1	6.9	4.7	7.3	4.5	6.1	4.7	7.3															
14	4.7	4.7	3.9	5.0	4.5	4.5	6.5	6.5	3.9	7.6	6.5	6.5	4.7														
15	3.9	4.5	3.9	3.9	3.9	3.2	5.1	4.5	2.4	6.0	5.6	4.5	5.6	3.2													
16	3.2	2.4	7.0	3.2	5.7	6.1	4.7	2.4	4.5	4.7	7.6	2.4	6.5	5.6	3.9												
17	7.3	8.0	6.1	5.6	4.7	6.5	7.0	7.0	5.0	5.7	2.4	7.0	4.7	6.5	6.0	7.3											
18	8.3	4.6	4.6	7.2	6.1	5.1	8.0	8.0	5.0	7.0	2.4	8.0	6.1	6.1	6.5	8.3	4.1										
19	4.7	5.7	4.7	5.6	2.4	5.1	7.0	7.0	5.0	8.0	6.1	7.0	4.7	3.2	4.5	6.1	5.7	7.0									
20	5.2	5.6	3.2	4.5	3.2	3.9	6.9	5.6	3.2	6.9	5.2	5.6	5.1	2.4	2.4	5.1	5.6	5.6	3.9								
21	7.3	8.0	6.1	5.6	4.7	6.5	7.0	7.0	5.0	5.7	2.4	7.0	4.7	6.5	6.0	7.3	1.0	5.7	5.7	5.6							
22	7.3	8.0	4.7	6.9	6.1	5.1	7.0	9.0	5.0	8.0	4.7	9.0	4.7	4.7	5.1	6.0	8.3	4.1	5.7	5.6	5.7						
23	7.0	7.3	6.5	4.5	5.1	6.9	6.1	6.1	4.5	4.7	3.2	6.1	4.1	6.1	5.6	6.5	2.4	4.6	6.1	2.4	2.4	6.1					
24	6.5	7.3	5.7	5.1	4.1	6.1	6.1	7.3	4.5	6.1	3.2	7.3	3.2	5.6	5.6	7.0	6.0	4.7	4.7	5.1	3.2	4.7	3.2				
25	3.9	4.5	3.9	3.9	3.9	3.2	6.0	4.5	2.4	6.0	5.6	4.5	5.6	3.2	1.0	3.9	6.0	6.0	4.5	7.6	6.0	6.0	5.6	3.2			
26	5.7	6.1	5.1	4.5	3.2	5.6	7.3	4.7	4.5	6.1	5.1	4.7	5.7	4.7	3.9	5.1	4.7	7.3	4.7	3.2	4.7	7.3	4.1	3.2	3.9		
27	3.2	4.7	5.7	5.1	4.1	4.7	6.1	4.7	4.5	6.1	6.5	4.7	6.5	5.6	3.9	4.1	6.1	7.3	4.7	5.1	6.1	7.3	6.5	4.1	3.9	5.6	
28	2.4	1.0	7.3	3.9	6.1	6.1	4.1	4.1	5.0	5.7	8.3	4.1	6.1	5.1	4.5	2.4	8.0	9.0	5.7	5.6	8.0	7.3	7.3	7.3	4.5	5.1	4.7



## Pair-wise Comparison Matrix # 3

## Foreign Currency Transactions and Statements

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	6.0																										
2	5.5	2.0																									
3	3.7	5.8	5.2																								
4			3.7																								
5	5.2	7.1	6.6	3.7																							
6	5.2	7.1	6.6	4.7	5.0																						
7	6.5	6.4	5.8	2.0	3.3	5.0																					
8	5.2	3.3	2.0	4.6	6.4	5.0	5.6																				
9	5.5	2.0	1.0	5.2	6.6	4.7	5.8	2.0																			
10	5.2	7.1	6.6	3.7	1.0	5.0	3.3	6.4	6.6																		
11	4.1	6.4	5.8	2.0	3.3	5.0	1.0	5.6	5.8	3.3																	
12	4.0	4.7	4.4	4.4	4.7	2.0	4.7	4.7	4.4	4.7	4.7																
13	5.2	6.1	5.8	3.7	5.2	4.4	4.1	6.0	5.8	5.2	4.1	5.1															
14	3.3	6.6	6.3	4.9	4.1	4.4	5.2	6.1	6.3	4.1	5.2	4.0	6.1														
15	4.0	4.7	4.4	4.4	4.7	2.0	4.7	4.7	4.4	4.7	4.7	2.0	5.1	4.0													
16	4.1	4.1	3.7	3.2	5.2	4.4	4.1	4.1	3.7	5.2	4.1	4.1	5.2	5.2	3.6												
17	4.8	3.6	3.1	4.0	5.7	3.6	4.8	3.6	3.6	5.7	4.8	4.8	4.8	5.7	2.6	2.6											
18	4.8	6.1	5.5	3.2	2.6	4.4	2.6	5.2	5.5	2.6	2.6	4.0	4.8	4.8	3.6	4.8	4.5										
19	3.7	5.8	5.2	1.0	3.7	4.7	2.0	4.9	5.2	3.7	4.4	4.4	3.7	4.9	4.0	3.2	3.6	3.2									
20	6.1	5.6	4.9	4.9	6.4	5.0	5.6	4.6	4.9	6.4	5.6	5.6	4.1	6.8	5.4	5.2	4.5	5.2	4.9								
21	4.1	5.6	4.9	3.7	4.6	5.0	5.6	4.6	4.9	4.6	3.3	4.7	5.2	5.2	4.4	4.1	4.5	4.1	3.7	6.4							
22	4.1	4.6	3.7	3.7	5.6	5.0	4.6	3.3	3.3	5.6	4.6	4.7	5.2	5.2	4.0	2.6	3.2	5.2	3.7	5.6	3.3						
23	3.7	4.9	4.1	2.6	4.9	4.7	3.7	3.7	4.1	4.8	3.7	4.4	5.5	4.9	4.0	2.0	2.6	4.5	2.6	4.9	3.7	2.0					
24	5.1	5.5	5.2	3.6	3.2	4.0	3.2	5.5	5.2	3.2	3.2	3.6	4.5	5.1	3.2	4.5	4.1	2.0	3.6	5.5	4.5	5.5	4.8				
25	4.8	6.1	5.5	3.2	4.1	4.4	4.1	5.2	5.5	4.1	4.1	4.7	3.6	4.8	4.4	3.6	4.0	4.1	3.2	4.1	5.2	4.1	4.5	4.5			
26	2.6	6.4	5.8	4.1	5.6	5.0	4.6	5.6	5.8	5.8	4.6	4.7	5.2	4.1	5.5	4.1	4.5	5.2	3.7	5.6	5.6	4.6	4.1	5.5	4.1		
27	4.4	5.0	4.7	4.7	5.0	1.0	5.0	5.0	4.7	5.0	5.0	4.4	4.4	4.4	2.6	4.4	4.0	4.4	4.7	5.0	5.0	5.0	4.7	4.0	4.4	4.1	
28	4.9	6.6	6.1	3.3	2.0	4.7	3.7	5.8	6.1	2.0	3.7	4.4	3.7	3.7	4.0	4.5	4.8	3.2	3.3	5.8	4.9	4.9	4.1	3.6	3.2	4.9	4.7



Pair-wise Comparison Matrix # 4

Marketable Securities

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1																											
2	7.3																										
3	7.3	3.6																									
4	6.2	4.4	2.6																								
5	5.0	3.6	3.6	2.6																							
6	3.6	5.7	5.7	4.4	3.6																						
7	2.6	8.2	8.2	7.3	6.2	4.4																					
8	1.0	7.3	7.3	6.2	5.0	3.6	2.6																				
9	2.6	8.2	8.2	7.3	6.2	4.4	1.0	2.6																			
10	4.4	7.3	6.9	5.7	5.7	3.6	3.6	4.4	3.6																		
11	5.0	3.6	3.6	2.6	1.0	3.6	6.2	5.0	6.2	5.7																	
12	5.7	3.6	3.6	4.4	3.6	4.6	5.7	5.7	6.2	3.6	3.6																
13	3.6	4.4	5.7	5.2	2.6	2.6	4.4	3.6	4.4	2.6	2.6	2.6															
14	3.6	7.3	7.8	6.9	5.7	3.6	2.6	3.6	2.6	1.0	5.7	5.7	4.4														
15	3.6	7.3	7.8	6.9	5.7	3.6	2.6	3.6	2.6	1.0	5.7	5.7	4.4	1.0													
16	2.6	8.2	8.2	7.3	6.2	4.4	1.0	2.6	1.0	2.6	6.2	6.2	5.0	2.6	2.6												
17	4.4	4.4	4.4	3.6	2.6	2.6	5.0	4.4	5.0	4.4	2.6	2.6	1.0	4.4	4.4	5.0											
18	2.6	8.2	8.2	7.3	6.2	4.4	1.0	2.6	1.0	2.6	6.2	6.2	5.0	2.6	2.6	1.0	5.0										
19	8.2	2.6	2.6	3.6	4.4	6.2	9.0	8.2	8.2	8.2	4.4	4.4	5.0	8.2	8.2	9.0	5.0	9.0									
20	2.6	8.2	8.2	7.3	6.2	4.4	1.0	2.6	1.0	2.6	6.2	6.2	5.0	2.6	2.6	1.0	5.0	1.0	9.0								
21	4.4	4.4	4.4	3.6	2.6	2.6	5.0	4.4	5.0	4.4	2.6	2.6	1.0	4.4	4.4	5.0	1.0	5.0	5.0	5.0							
22	3.6	5.7	5.0	4.4	3.6	3.6	4.4	3.6	4.4	5.0	3.6	3.6	2.6	5.0	5.0	4.4	2.6	4.4	6.2	4.4	2.6						
23	2.6	8.2	8.2	7.3	6.2	4.4	1.0	2.6	2.6	2.6	6.2	6.2	5.0	2.6	2.6	1.0	5.0	1.0	9.0	1.0	5.0	4.4					
24	4.4	4.4	4.4	3.6	2.6	2.6	5.0	4.4	5.0	4.4	2.6	2.6	1.0	4.4	4.4	5.0	1.0	5.0	5.0	1.0	1.0	2.6	5.0				
25	2.6	8.2	8.2	7.3	6.2	4.4	1.0	2.6	1.0	2.6	6.2	6.2	5.0	2.6	2.6	1.0	5.0	1.0	9.0	1.0	5.0	4.4	1.0	5.0			
26	3.7	8.2	8.2	7.3	6.2	4.4	1.0	2.6	1.0	2.6	6.2	6.2	5.0	2.6	2.6	1.0	5.0	1.0	9.0	1.0	5.0	4.4	1.0	5.0	1.0		
27	6.9	4.4	2.6	3.6	4.4	5.2	7.3	6.9	7.3	6.9	4.4	2.6	3.6	6.9	6.9	7.3	3.6	7.3	7.3	7.3	3.6	7.3	7.3	3.6	7.3	7.3	
28	5.2	8.2	6.9	5.7	6.2	4.4	4.6	5.2	4.6	5.2	6.2	6.2	5.0	5.2	5.2	4.6	5.0	4.6	7.8	4.6	5.0	4.6	4.6	5.0	4.6	4.6	5.7



## Pair-wise Comparison Matrix # 5

## General Purchasing Power Accounting

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1																											
2	4.9																										
3	4.0	2.1																									
4	4.9	1.0	2.1																								
5	3.5	3.5	2.1	3.5																							
6	4.9	1.0	2.1	1.0	3.5																						
7	1.0	4.9	4.0	4.9	3.5	4.9																					
8	9.0	7.6	7.8	7.6	8.3	7.6	9.0																				
9	2.8	4.4	3.9	4.4	4.4	4.4	2.8	8.0																			
10	1.2	1.2	2.1	1.5	1.0	3.5	3.5	8.3	4.4																		
11	5.9	4.9	6.2	5.9	6.8	5.9	5.9	6.8	5.5	6.8																	
12	9.0	7.6	7.8	7.6	8.3	7.6	9.0	1.0	8.0	8.3	6.8																
13	5.0	5.0	4.6	5.0	5.0	5.0	5.0	5.0	4.3	5.0	5.0	5.0															
14	3.5	3.5	4.0	3.5	4.9	3.5	3.5	8.3	2.8	4.9	4.9	8.3	5.0														
15	9.0	7.6	7.8	7.6	8.3	7.6	9.0	1.0	8.0	8.3	6.8	1.0	5.0	8.3													
16	1.0	4.9	4.0	4.9	3.5	4.9	1.0	9.0	2.8	5.9	9.0	9.0	5.0	3.5	5.2												
17	5.2	7.1	6.5	7.1	6.2	7.1	5.2	7.1	5.8	6.2	4.0	7.1	4.6	6.2	7.1	5.2											
18	9.0	7.6	7.8	7.6	8.4	7.6	9.0	1.0	2.8	3.5	5.9	9.0	5.0	3.5	9.0	1.0	5.2										
19	4.9	1.0	2.1	1.0	3.5	1.0	4.9	7.6	4.4	3.5	5.9	7.6	5.0	1.1	7.6	4.9	7.1	4.9									
20	9.0	7.6	7.8	7.6	8.3	7.6	9.0	1.0	8.1	8.3	6.8	1.0	5.0	8.3	1.0	9.0	7.1	9.0	7.6								
21	5.9	5.9	6.2	5.9	6.8	5.9	5.9	6.8	6.1	6.8	1.0	6.8	5.0	4.9	6.8	5.9	4.0	5.9	5.9	6.8							
22	9.0	7.6	7.8	7.6	8.3	7.6	9.0	1.0	8.1	8.3	6.8	1.0	5.0	8.3	1.0	9.0	7.1	9.0	7.6	1.0	6.8						
23	5.9	5.9	5.2	5.9	4.9	5.9	5.9	6.8	6.5	4.9	4.9	6.8	5.0	6.8	6.8	5.9	4.0	5.9	5.9	6.8	4.9	6.8					
24	4.9	4.9	4.0	4.9	3.5	3.5	4.9	7.6	5.5	3.5	7.6	7.0	5.0	5.9	7.6	4.9	7.1	4.9	5.9	7.6	7.6	7.6	5.9				
25	5.4	4.3	3.8	4.3	4.3	4.3	5.4	5.4	4.8	4.3	5.4	5.4	2.8	5.4	5.4	5.4	5.4	5.4	4.3	5.4	5.4	5.4	4.3	4.3			
26	9.0	7.6	7.8	7.6	8.3	7.6	9.0	1.0	8.1	8.3	6.8	1.0	5.0	8.3	1.0	9.0	7.1	9.0	7.6	1.0	6.8	1.0	6.8	7.6	5.4	5.4	7.8
27	4.0	2.1	1.0	2.1	2.1	2.1	4.0	7.8	4.0	2.1	6.2	7.8	4.6	4.0	7.8	4.0	6.5	4.0	2.1	7.8	6.2	7.8	5.4	4.0	3.8	7.8	
28	9.0	7.6	7.8	7.6	8.8	7.6	9.0	1.0	8.1	8.3	6.8	1.0	5.0	8.3	1.0	9.0	7.1	9.0	7.6	1.0	6.8	1.0	6.8	7.6	5.4	1.0	7.8



Pair-wise Comparison Matrix # 6

Leases

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1																											
2	5.2																										
3	5.6	6.1																									
4	4.6	4.1	5.6																								
5	1.0	5.2	5.6	4.6																							
6	6.4	6.9	7.1	6.4	6.4																						
7	1.0	5.2	5.6	4.6	1.0	6.4																					
8	5.0	4.4	4.4	5.0	5.0	5.0	3.6																				
9	3.6	4.1	6.6	4.8	3.6	5.7	3.6	3.6																			
10	1.0	3.3	5.6	4.6	1.0	6.4	1.0	5.0	3.6																		
11	3.3	4.1	4.6	3.3	3.3	7.1	3.3	5.0	4.8	3.3																	
12	3.3	5.2	6.4	3.3	3.3	5.6	3.3	5.0	3.6	3.3	4.6																
13	5.0	4.4	5.0	5.0	5.0	5.0	5.0	1.0	3.6	5.0	5.0	5.0															
14	4.4	4.8	5.4	5.4	4.4	5.4	4.4	2.6	2.6	4.4	5.4	4.4	2.6														
15	5.8	5.5	6.6	5.8	5.8	4.9	5.8	4.7	5.1	5.8	6.6	4.9	4.7	4.7													
16	3.7	4.5	4.9	3.7	3.7	7.3	3.7	4.7	4.5	3.7	2.0	4.9	4.7	5.1	6.9												
17	4.4	4.8	5.4	5.4	4.4	5.4	4.4	2.6	2.6	4.4	5.4	4.4	2.6	2.6	5.1	5.1											
18	3.6	4.1	6.6	4.8	3.6	5.7	3.6	3.6	1.0	3.6	4.8	3.6	3.6	2.8	2.4	4.5	2.6										
19	3.3	5.2	6.4	3.3	3.3	5.6	3.3	5.0	4.8	3.3	1.0	4.6	5.0	5.7	6.6	2.0	5.4	4.8									
20	5.0	4.4	4.5	4.5	4.5	4.5	4.5	1.0	3.6	5.0	5.0	5.0	1.0	2.6	4.7	4.7	2.6	3.6	5.0								
21	5.0	4.4	5.0	5.0	5.0	5.0	5.0	1.0	3.6	5.0	5.0	5.0	1.0	2.6	4.7	4.7	2.6	3.6	5.0	1.0							
22	4.6	5.2	5.6	6.4	4.0	6.4	4.6	5.0	4.8	5.6	5.6	5.6	5.0	4.4	3.7	5.8	5.4	4.8	5.6	5.0	5.0						
23	1.0	5.2	5.6	4.6	1.0	6.4	1.0	5.0	3.6	1.0	3.3	3.3	5.0	4.4	5.8	3.7	4.4	3.6	3.3	5.0	5.0	4.9					
24	3.7	3.7	4.9	2.0	3.7	6.6	3.7	5.0	4.5	3.7	2.0	3.7	4.7	5.1	6.1	2.6	5.1	4.5	2.0	4.7	4.7	3.7					
25	5.0	5.0	5.0	5.0	5.0	5.0	5.0	1.0	3.6	5.0	5.0	5.0	1.0	2.6	4.7	4.7	2.6	3.6	5.0	1.0	1.0	5.0	5.0				
26	5.1	4.0	6.0	4.0	5.1	5.1	5.1	3.2	3.2	5.1	5.1	4.0	3.2	3.2	4.4	4.8	4.0	3.2	5.1	3.2	3.2	5.1	4.4				
27	1.0	5.2	5.6	4.6	1.0	6.4	1.0	5.0	3.6	1.0	3.3	3.3	5.0	4.4	5.8	3.7	4.4	3.6	5.0	4.6	4.6	1.0	2.0	5.0			
28	4.6	4.1	7.1	6.4	4.6	6.4	4.6	5.0	3.6	4.6	5.6	5.6	5.0	4.4	5.8	5.8	4.4	3.6	5.0	4.6	4.6	4.6	4.9	5.0	5.1	4.6	4.1



Pair-wise Comparison Matrix # 7

## Segmental Reporting

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1																											
2	5.3																										
3	5.0	5.0																									
4	3.8	6.4	5.0																								
5	5.3	5.3	5.0	6.4																							
6	3.8	3.8	5.0	5.3	6.4																						
7	3.8	3.8	5.0	5.3	6.4	1.0																					
8	6.4	6.4	5.0	5.3	3.8	7.4	7.4																				
9	6.6	6.6	5.0	5.3	3.8	7.4	7.4	1.0																			
10	3.8	3.8	5.0	5.3	6.4	1.0	1.0	7.4	7.4																		
11	6.6	6.6	5.0	5.3	8.2	5.3	5.3	7.4	7.4	5.3																	
12	6.6	3.8	5.0	7.4	3.8	5.3	5.3	7.4	7.4	5.3	7.4																
13	2.2	5.6	4.6	2.2	5.6	4.2	4.3	5.6	5.6	4.2	5.6	6.7															
14	5.6	4.3	4.6	5.6	5.6	4.2	4.3	4.3	4.3	5.6	5.6	5.6	4.7														
15	6.4	6.4	5.0	5.3	3.8	7.4	7.4	1.0	1.0	7.4	7.4	5.3	5.6	4.3													
16	1.0	5.3	5.0	3.8	5.3	3.8	3.8	6.4	6.4	3.8	6.4	6.4	2.2	5.6	6.4												
17	5.3	7.4	5.0	3.8	7.4	6.4	6.4	6.4	6.4	6.4	3.8	8.2	4.3	5.6	6.4	5.3											
18	5.3	7.4	5.0	3.8	7.4	6.4	6.4	6.4	6.4	6.4	3.8	8.2	4.3	5.6	6.4	5.3	1.0										
19	6.4	6.4	5.0	5.3	3.8	7.4	7.4	1.0	1.0	7.4	7.4	5.3	5.6	4.3	1.0	6.4	6.4	6.4									
20	1.0	5.3	5.0	3.8	5.3	3.8	3.8	6.4	6.4	3.8	6.4	6.4	2.2	5.6	6.4	1.0	5.3	5.3	6.4								
21	6.4	6.4	3.9	5.3	8.2	5.3	5.3	7.4	7.4	5.3	1.0	7.4	5.6	5.6	7.4	6.4	3.8	3.8	7.4	6.4							
22	4.3	6.7	4.6	2.2	6.7	5.6	5.6	5.6	5.6	5.6	4.3	7.6	3.0	5.6	5.6	4.3	2.2	2.2	5.6	4.3	4.3						
23	6.7	6.7	4.6	5.6	8.5	5.6	5.6	7.6	7.6	5.6	2.2	7.6	6.9	5.9	7.6	6.7	4.3	4.3	7.6	6.7	2.2	4.7					
24	6.4	6.4	5.0	5.3	3.8	7.4	7.4	1.0	1.0	7.4	7.4	5.6	5.6	4.3	1.0	6.4	6.4	6.4	1.0	6.4	7.4	5.9	7.6				
25	7.4	7.4	5.0	6.4	5.3	8.2	8.2	3.8	3.8	8.2	8.2	6.4	6.7	5.6	3.8	7.4	7.4	7.4	3.8	7.4	8.2	6.7	7.6	3.8			
26	7.4	5.3	5.0	6.4	5.3	6.4	6.4	3.8	3.8	6.4	6.4	3.8	6.7	4.3	3.8	7.4	7.4	7.4	3.8	7.4	6.4	6.7	6.7	3.8	5.3		
27	5.6	4.3	4.6	6.7	2.2	5.6	5.6	4.3	4.3	5.6	7.6	2.2	6.0	5.3	4.3	5.6	7.6	7.6	4.3	5.6	7.0	7.9	4.3	4.3	5.6	4.3	
28	6.4	3.8	5.0	7.4	3.8	5.3	5.3	5.3	5.3	5.3	7.4	1.0	6.7	5.6	5.3	6.4	8.2	8.2	5.3	6.4	7.6	7.6	7.6	5.3	6.4	3.8	2.2



Pair-wise Comparison Matrix # 8

Restructured Debt Accounting

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	4.5																										
2	6.1	5.0																									
3	4.5	1.0	5.0																								
4	1.0	4.5	6.1	4.5																							
5	7.3	5.0	4.1	5.0	7.3																						
6	7.3	5.0	4.1	5.0	7.3	1.0																					
7	3.3	4.5	6.1	4.5	3.3	7.3	7.3																				
8	6.1	5.0	1.0	5.0	6.1	4.1	4.1	7.0																			
9	4.1	4.5	4.7	4.5	4.1	6.1	6.1	4.7	4.7																		
10	6.5	3.3	6.9	3.3	6.5	5.6	5.6	6.9	6.9	6.5																	
11	7.3	5.0	4.1	5.0	7.3	1.0	1.0	8.1	4.1	6.1	5.6																
12	2.4	5.0	7.0	5.0	2.7	8.1	8.1	1.0	7.0	4.7	6.9	8.1	1.0														
13	2.4	5.0	7.0	5.0	2.7	8.1	8.1	1.0	7.0	4.7	6.9	8.1	1.0	5.0													
14	4.5	1.0	5.0	1.0	4.5	5.0	5.0	5.0	5.0	4.5	3.3	5.0	5.0	5.7	5.0												
15	4.7	5.0	4.1	5.0	4.7	5.7	5.7	5.7	4.1	2.4	6.9	5.7	5.7	5.7	5.0	5.0											
16	4.5	1.0	5.0	1.0	4.5	5.0	5.0	5.0	5.0	4.5	3.3	5.0	5.0	5.0	1.0	5.0	1.0										
17	4.5	1.0	5.0	1.0	4.5	5.0	5.0	5.0	5.0	4.5	3.3	5.0	5.0	5.0	1.0	5.0	1.0	5.0									
18	6.5	3.3	6.9	3.3	6.5	6.9	5.6	6.9	6.9	6.5	1.6	5.6	6.9	6.9	3.3	6.9	3.3	3.3	3.3								
19	6.1	5.0	1.0	5.0	6.1	4.1	4.1	7.0	1.0	4.7	6.9	4.1	7.0	7.0	5.0	4.1	5.0	5.0	5.0	6.9							
20	6.5	3.3	6.9	3.3	6.5	6.9	5.6	6.9	6.9	6.5	1.0	5.6	6.9	6.9	3.3	6.8	3.3	3.3	3.3	1.0	6.9						
21	8.4	5.0	5.7	5.0	8.4	4.1	4.1	9.0	5.7	7.3	3.9	4.1	9.0	9.0	5.0	7.0	5.0	5.0	3.9	3.9	3.9	1.0					
22	8.4	5.0	5.7	5.0	8.4	4.1	4.1	9.0	5.7	7.3	3.9	4.1	9.0	9.0	5.0	7.0	5.0	5.0	3.9	3.9	3.9	1.0	5.0				
23	4.5	1.0	5.0	1.0	4.5	5.0	5.0	5.0	5.0	4.5	3.3	5.0	5.0	5.0	1.0	5.0	1.0	1.0	3.3	5.0	3.3	5.0	5.0	5.0			
24	6.1	5.0	1.0	5.0	6.1	4.1	4.1	7.0	1.0	6.5	1.0	5.6	6.9	6.9	3.3	6.9	3.3	3.3	5.6	1.0	6.9	1.0	5.7	5.0	5.0		
25	4.5	1.0	5.0	1.0	4.5	5.0	5.0	5.0	5.0	4.5	3.3	5.0	5.0	5.0	1.0	5.0	1.0	1.0	3.3	5.0	3.3	5.0	5.0	1.0	5.0		
26	6.1	5.0	1.0	5.0	6.1	4.1	4.1	7.0	1.0	6.5	1.0	5.6	6.9	6.9	3.3	6.9	3.3	3.3	5.6	1.0	6.9	1.0	5.7	5.0	5.0	5.0	
27	6.1	5.0	1.0	5.0	6.1	4.1	4.1	7.0	1.0	6.5	1.0	5.6	6.9	6.9	3.3	6.9	3.3	3.3	5.6	1.0	6.9	1.0	5.7	5.0	5.0	5.0	
28	6.1	5.0	1.0	5.0	6.1	4.1	4.1	7.0	1.0	6.5	1.0	5.6	6.9	6.9	3.3	6.9	3.3	3.3	5.6	1.0	6.9	1.0	5.7	5.0	5.0	5.0	1.0



## Pair-wise Comparison Matrix # 9

## Extractive Industry Accounting

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	4.6																										
2	5.2	2.6																									
3	6.4	5.2	3.6																								
4	6.4	4.6	2.6	3.6																							
5	6.4	4.6	2.6	3.6	2.6																						
6	6.9	5.2	3.6	3.6	3.6	2.6																					
7	4.6	6.4	5.2	3.6	5.7	2.6	3.6																				
8	3.6	5.7	5.2	4.4	4.6	2.6	6.4	5.7																			
9	7.8	6.4	5.2	5.2	3.6	4.4	3.6	3.6	5.0																		
10	3.6	3.6	2.6	3.6	3.6	4.4	3.6	3.6	5.0	3.6																	
11	5.0	5.0	4.4	4.4	5.0	4.4	5.0	3.6	5.0	3.6	4.4																
12	6.9	5.2	4.6	5.7	5.2	3.6	6.9	5.2	2.6	5.2	4.4	5.7															
13	8.2	6.9	5.7	5.7	5.2	4.6	6.9	6.9	5.0	3.6	1.0	4.4	4.4														
14	5.0	5.0	4.4	4.4	5.0	4.4	5.0	3.6	5.0	3.6	1.0	4.4	4.4	1.0													
15	5.0	5.0	4.4	4.4	5.0	4.4	5.0	3.6	5.0	3.6	1.0	4.4	4.4	1.0	1.0												
16	4.4	4.4	3.6	3.6	4.4	5.0	4.4	4.4	6.2	2.6	2.6	5.7	5.0	2.6	2.6	2.6											
17	5.0	5.0	4.4	4.4	5.0	4.4	3.6	3.3	5.0	5.0	1.0	4.4	4.4	1.0	1.0	1.0	1.0										
18	5.0	5.0	4.4	4.4	5.0	4.4	3.6	3.3	5.0	5.0	1.0	4.4	4.4	1.0	1.0	1.0	1.0	1.0									
19	7.8	6.4	5.2	5.2	4.6	6.4	6.4	7.3	6.4	5.7	5.0	6.9	6.9	5.0	5.0	4.4	5.0	5.0	5.0								
20	7.8	6.4	5.2	5.2	4.6	6.4	6.4	7.3	6.4	5.7	5.0	6.9	6.9	5.0	5.0	4.4	5.0	5.0	1.0	1.0							
21	5.0	5.0	4.4	4.4	4.4	5.0	5.0	3.6	3.6	3.6	1.0	4.4	4.4	1.0	1.0	2.6	1.0	1.0	5.0	5.0	5.0						
22	5.0	5.0	4.4	4.4	4.4	5.0	5.0	3.6	3.6	3.6	1.0	4.4	4.4	1.0	1.0	2.6	1.0	1.0	5.0	5.0	1.0	1.0					
23	5.0	5.0	4.4	4.4	4.4	5.0	5.0	3.6	3.6	3.6	1.0	4.4	4.4	1.0	1.0	2.6	1.0	1.0	5.0	5.0	1.0	1.0	1.0				
24	2.6	2.6	3.6	4.6	5.2	5.7	5.2	4.4	6.9	2.6	4.4	5.7	7.3	4.4	4.4	3.6	4.4	4.4	6.9	6.9	4.4	4.4	4.4	4.4			
25	5.0	5.0	4.4	4.4	5.0	4.4	5.0	3.3	5.0	3.6	1.0	4.4	4.4	1.0	1.0	2.6	1.0	1.0	5.0	5.0	1.0	1.0	1.0	1.0	1.0		
26	7.8	6.4	5.2	4.6	5.2	5.2	6.4	6.3	6.4	5.7	5.0	5.7	2.6	5.0	5.0	4.4	5.0	5.0	1.0	1.0	5.0	5.0	6.9	5.0	5.0		
27	5.0	5.0	4.4	4.4	5.0	4.4	5.0	3.3	5.0	3.6	1.0	4.4	4.4	1.0	1.0	2.6	1.0	1.0	5.0	5.0	1.0	1.0	1.0	4.4	1.0	5.0	
28	6.4	4.6	2.6	2.6	1.0	2.6	4.6	5.7	4.6	3.6	5.0	5.2	5.2	5.0	5.0	4.4	5.0	5.0	4.6	4.6	5.0	5.0	5.2	5.2	5.0	4.6	5.0



Pair-wise Comparison Matrix # 10

Composite

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1																											
2	5.2																										
3	5.8	4.6																									
4	5.2	4.4	4.5																								
5	4.3	5.1	4.8	4.5																							
6	5.4	5.4	4.9	4.8	5.2																						
7	4.2	5.6	4.5	5.0	5.2	4.8																					
8	5.2	5.5	6.0	5.3	5.5	6.0	6.0																				
9	5.9	5.2	5.0	5.1	5.0	4.8	4.9	4.9																			
10	3.8	5.1	5.4	4.8	4.3	4.9	3.5	5.7	5.3																		
11	5.6	5.3	5.1	4.4	5.3	5.3	5.3	6.1	5.7	5.7																	
12	5.8	5.7	5.6	5.5	4.4	4.7	5.2	5.1	5.1	5.3	5.8																
13	4.8	5.4	5.6	4.8	4.4	4.9	5.2	5.1	5.1	5.0	4.9	5.6															
14	4.1	5.0	5.5	5.1	4.6	5.0	5.2	5.0	4.3	4.8	5.1	5.9	4.4														
15	5.6	4.7	5.6	5.2	5.4	5.1	5.9	4.3	4.6	5.6	5.3	4.5	5.0	4.4													
16	3.8	5.1	5.1	4.4	4.9	5.3	4.2	5.5	4.5	4.7	5.8	5.7	5.0	4.7	5.3												
17	5.3	5.5	5.4	5.0	5.2	5.3	5.4	5.4	4.9	5.1	4.1	5.5	4.3	5.0	4.8	5.2											
18	5.4	6.2	5.9	5.3	5.6	5.4	5.5	4.8	4.2	4.3	4.1	6.2	4.8	5.5	4.9	4.7	3.7										
19	5.9	4.7	4.6	3.7	4.2	6.0	6.0	6.4	5.5	4.6	4.6	7.7	5.4	5.3	5.3	5.5	5.3	5.6									
20	5.9	5.9	5.2	5.5	5.6	4.9	5.6	5.0	4.8	5.4	6.0	5.3	4.4	5.3	4.6	5.2	5.0	5.2	6.0								
21	5.4	5.4	5.3	4.8	5.3	5.0	5.3	5.5	5.3	4.7	2.9	5.5	4.4	5.0	5.1	5.5	3.3	4.1	5.1	5.5							
22	6.1	6.0	5.0	5.1	6.1	5.4	5.8	5.8	5.3	5.8	4.4	5.5	5.2	5.8	4.3	5.6	4.7	5.0	5.3	4.9	4.5						
23	5.2	6.0	5.8	5.4	5.7	5.4	4.3	5.9	5.2	4.2	4.0	5.3	5.4	5.5	5.3	5.2	4.2	4.2	5.8	5.4	3.7	4.7					
24	4.9	4.8	4.6	4.0	4.0	5.3	5.2	5.5	4.9	4.4	4.4	5.3	4.8	4.7	4.0	4.3	5.1	4.4	4.2	6.0	4.9	5.0	5.3				
25	5.0	5.7	5.1	5.0	5.1	5.0	5.4	4.8	3.9	5.4	5.4	5.3	4.9	4.6	4.5	5.1	4.5	4.6	5.4	4.7	5.4	5.2	4.8	4.7			
26	6.0	5.7	6.0	5.3	5.2	5.3	5.5	5.0	4.5	5.2	4.8	5.3	4.9	4.1	4.3	5.0	4.8	4.6	4.6	4.0	5.1	5.2	5.0	5.1	4.4		
27	4.8	4.4	4.4	4.8	4.0	4.4	5.0	5.5	4.4	5.3	5.0	4.4	5.1	4.9	5.0	5.2	4.9	5.1	5.1	5.3	5.4	5.8	5.4	4.3	4.5	5.5	
28	5.6	5.5	6.0	5.7	4.8	4.9	4.4	5.6	4.8	5.4	5.4	4.9	5.5	5.2	5.2	5.4	5.7	5.7	5.7	4.8	6.0	5.7	5.5	5.6	5.1	4.5	4.8



Pair-wise Comparison Matrix # 11

Pre-1/1/76 Composite

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1																												
2	5.5																											
3	6.5	4.9																										
4	5.5	4.7	4.6																									
5	4.6	5.6	5.0	4.5																								
6	4.4	6.0	5.2	5.3	4.7																							
7	4.2	6.1	4.2	5.5	5.3	5.2																						
8	4.4	5.0	6.3	5.0	5.6	5.0	4.9																					
9	4.5	4.9	5.3	5.2	5.5	4.3	4.6	3.7																				
10	4.6	6.4	7.1	5.2	4.9	5.1	3.2	5.1	5.2																			
11	5.6	5.8	4.5	4.1	3.9	4.8	5.5	6.1	5.3	6.2																		
12	3.9	6.0	5.5	4.6	4.3	4.1	4.4	4.8	5.0	4.4	5.6																	
13	4.5	5.3	5.8	4.9	3.9	4.3	4.0	5.6	4.8	3.8	4.1	4.7																
14	4.2	5.5	5.9	5.4	5.4	4.2	5.0	5.3	4.0	4.9	5.5	5.3	4.9															
15	4.4	4.9	5.2	5.0	4.9	3.7	5.0	5.1	3.3	4.7	4.8	5.1	3.2															
16	4.3	5.4	5.9	4.5	5.6	5.1	4.5	4.4	3.9	5.6	5.5	4.7	4.8	3.5														
17	5.8	5.5	5.2	5.2	4.7	4.7	5.9	5.7	4.7	4.7	4.5	4.8	5.3	4.9	5.6													
18	5.6	6.8	6.0	5.8	5.1	4.6	4.9	5.4	3.8	3.3	4.2	5.9	4.3	4.2	5.4	4.7												
19	5.7	4.5	4.0	3.4	3.9	5.2	6.3	6.7	5.9	6.1	4.4	5.2	4.5	5.5	5.8	5.4	6.3											
20	5.1	6.0	5.2	5.6	5.2	4.4	5.3	4.4	3.5	4.9	5.8	5.5	4.7	4.3	4.3	4.9	4.7	6.3										
21	4.9	5.7	5.2	4.8	3.6	4.3	5.3	5.2	4.8	3.3	3.3	4.4	3.6	4.8	5.0	5.5	3.5	4.4	4.8									
22	5.6	6.0	3.9	4.7	5.2	4.8	6.2	5.7	4.5	5.2	4.0	6.0	4.5	5.1	4.8	4.9	4.8	4.7	4.8	5.3								
23	4.2	6.5	6.5	5.6	4.9	4.9	3.7	4.6	4.2	2.9	4.8	5.1	4.4	4.8	4.7	4.8	4.4	4.1	6.2	4.6	4.4							
24	5.4	5.5	4.6	4.0	3.7	7.1	5.0	6.0	4.8	4.1	2.7	4.9	3.6	4.9	4.1	5.0	5.0	4.2	3.9	5.7	3.6	5.0						
25	4.6	6.1	6.2	5.0	5.0	4.3	4.9	5.0	3.9	4.9	5.8	5.2	4.9	4.0	3.9	4.2	4.4	4.4	6.3	4.7	3.4	3.9	4.3	5.1				
26	4.4	6.1	6.2	5.2	5.0	4.9	5.0	4.4	3.8	4.5	5.1	5.0	5.1	3.4	4.0	4.2	4.8	4.5	5.8	3.7	4.9	5.4	3.8	4.8	3.8			
27	4.9	4.3	5.0	4.9	4.3	4.0	5.8	5.2	5.1	5.8	5.5	3.4	4.7	5.1	4.9	5.7	4.6	5.8	5.7	5.3	4.7	5.8	4.6	4.6	5.2	5.3		
28	3.8	5.6	6.7	5.2	4.7	4.8	3.6	5.1	5.2	5.3	6.1	4.5	4.6	4.8	4.9	4.7	6.2	5.9	5.7	5.5	5.5	6.1	4.8	5.4	4.8	4.9	4.9	







## APPENDIX II

## Discriminant Analysis Input

	—Policy Question—																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
AA&Co.	1	1	1	1	-1	-1	0	-1	1	-1	1	1	1	-1	1	0	0
AY&Co.	0	0	0	0	-1	-1	-1	-1	1	1	1	-1	1	1	1	1	1
C&L	-1	1	-1	1	1	-1	0	-0	-1	1	1	0	1	1	1	1	1
E&E	-1	0	-1	1	0	0	-1	0	1	1	1	1	1	-1	1	0	-1
H&S	0	1	1	1	1	-1	1	0	1	1	1	1	-1	-1	1	-1	-1
FW&Co.	0	1	1	1	0	-1	1	0	-1	0	0	0	0	0	0	0	0
PMM&Co.	1	1	1	1	-1	1	-1	-1	1	1	1	1	1	-1	1	-1	-1
TR&Co.	0	-1	1	1	-1	-1	-1	1	1	1	1	1	1	1	1	1	1
AAA	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	1
AJCPA	1	1	1	1	-1	1	-1	1	1	1	1	1	-1	-1	1	-1	-1
FET	0	1	-1	1	1	1	1	1	0	1	1	1	1	-1	1	-1	-1
FAF	0	1	1	1	-1	-1	-1	-1	1	0	1	0	0	0	0	0	0
NAA	0	1	1	1	1	1	0	-1	1	1	-1	0	1	-1	1	0	-1
ASCPA	0	0	0	0	1	-1	0	-1	0	-1	1	1	-1	-1	1	0	0
DCICPA	0	1	-1	0	0	-1	0	0	0	0	0	0	0	0	0	0	0
NYSCPA	-1	1	-1	1	-1	-1	-1	0	1	1	1	0	1	-1	1	1	0
NEMA	-1	1	1	-1	1	1	1	1	1	1	1	0	1	0	0	-1	-1
GM	0	0	0	0	1	1	1	1	-1	1	1	1	1	0	1	-1	-1
Shell	0	1	-1	1	1	-1	1	-1	1	1	1	1	1	-1	1	0	-1
ACyanimid	-1	0	1	0	1	-1	0	0	0	1	-1	1	1	1	1	1	-1
duPont	0	1	1	1	1	1	1	1	1	1	1	1	1	-1	1	0	0
Aetna	-1	1	-1	1	1	1	1	-1	-1	1	1	1	1	-1	1	1	1
GE	1	1	1	1	1	1	0	1	1	1	1	1	1	-1	1	1	0
Exxon	0	1	-1	1	1	1	1	0	1	1	1	0	0	0	1	-1	-1
Marcor	-1	1	1	-1	0	-1	0	0	0	1	0	1	0	-1	1	1	-1
WRGrace	0	0	0	0	1	-1	0	1	1	-1	1	1	1	-1	1	1	-1
Grady	0	0	1	0	-1	-1	1	0	1	0	0	0	0	0	0	0	0
FASB	1	1	1	1	-1	-1	-1	-1	1	1	1	1	-1	-1	1	0	-1











APPENDIX I  
Stress Values

MDS Maps	Dimensional Stress Values			
	1	2	3	4
Composite	.4903	.2652	.1900	.1299
Pre-1/1/76	.4163	.2488	.1693	.1197
Post-1/1/76	.5438	.2882	.1856	.1380
Individual projects:				
<u>SFAS No. 2</u>	.2673	.0797	.0471	.0248
<u>SFAS No. 5</u>	.3356	.1718	.1207	.0876
<u>SFAS No. 8</u>	.3491	.2070	.1196	.0689
<u>SFAS No. 12</u>	.1453	.0746	.0364	.0211
General Purchasing Power Accounting	*	.1663	.1035	.0678
<u>SFAS No. 13</u>	.2466	.1086	.0439	.0159
<u>SFAS No. 14</u>	.2628	.1029	.0564	.0386
<u>SFAS No. 15</u>	.3333	.1617	.0779	.0308
<u>SFAS No. 19</u>	.2717	.1908	.1327	.0975

\*Field length exceeded and computer did not generate one-dimensional solution.

Data bases for the MDS maps are explained in Chapter 3.



## APPENDIX J

## Classification Functions for Two-Group Scheme

Composite Weights for Groups:		
Projects	(A)	(B)
<u>SFAS No. 2</u>		
Policy question: 1	-1.35	-1.75
2	1.50	2.32
3	.89	.93
4	2.18	1.35
Constant	-2.02	-2.14
<u>SFAS No. 5</u>		
Policy question: 5	- .19	2.55
6	- .81	.44
7	- .33	.71
8	- .15	.29
9	.72	1.58
Constant	-1.20	-2.51
<u>SFAS No. 8</u>		
Policy question: 10	.56	1.51
11	1.72	1.47
12	- .22	.62
13	.01	1.06
14	.18	.10
15	6.27	5.64
16	1.05	2.17
17	.98	-2.82
Constant	-4.16	-6.09



Composite Weights for Groups:		
Project	(A)	(B)
<u>SFAS No. 12</u>		
Policy question: 18	3.03	.05
19	1.69	.62
20	-3.08	-.65
21	-.77	1.01
Constant	-1.58	-.93
<u>General Purchasing</u>		
<u>Power Accounting</u>		
Policy question: 22	-.85	1.50
23	-.86	-.57
24	1.00	-1.71
25	.00	.00
26	-.50	-.32
27	1.08	2.51
28	.70	-2.16
Constant	-1.50	-1.68
<u>SFAS No. 13</u>		
Policy question: 29	-.01	.85
30	-.41	-.27
31	-2.74	-2.01
32	.85	.32
Constant	2.92	1.00
34	-.96	-.33
35	-.71	-.60
36	-1.17	-.35
Constant	-2.63	-1.56



## APPENDIX K

Composite Weights for Groups:		
Project	(A)	(B)
<u>SFAS No. 14</u>		
Policy question: 37	3.30	1.78
38	-1.18	-2.38
Policy question: 39	3.74	3.11
40	.89	-.65
41	-2.54	-.88
42	.44	.15
Constant	-4.35	-3.06
<u>SFAS No. 15</u>		
Policy question: 43	-.25	-.07
44	1.72	-.35
45	-2.92	.66
46	-2.22	.21
47	2.01	.55
Constant	-1.87	-.81
<u>SFAS No. 19</u>		
Policy question: 48	2.55	1.26
Policy question: 49	.05	.26
50	3.41	-.67
51	-1.47	-.12
Constant	-2.94	-1.05

The format of the classification functions is discussed in Chapter 3.



## APPENDIX K

## Classification Functions for Three-Group Scheme

Projects	Composite Weights for Groups:		
	(A')	(B')	(C')
<u>SFAS No. 2</u>			
Policy question: 1	-1.68	-1.62	-1.80
2	.77	1.59	1.91
3	1.50	1.09	.84
4	3.20	2.53	1.25
Constant	-3.02	-2.78	-2.31
<u>SFAS No. 5</u>			
Policy question: 5	- .34	1.13	1.97
6	- .50	.29	- .09
7	- .01	- .31	.48
8	- .05	- .61	.13
9	.76	.89	1.26
Constant	-1.48	-1.57	-2.39
<u>SFAS No. 8</u>			
Policy question: 10	1.22	1.63	2.39
11	3.73	2.64	4.73
12	- .44	-1.31	.52
13	.02	1.45	.45
14	.49	- .09	.26
15	6.19	4.82	4.84
16	2.31	1.60	4.81
17	-2.52	-2.60	-5.00
Constant	-5.99	-4.89	-8.39



Composite Weights for Groups:			
Projects	(A')	(B')	(C')
<u>SFAS No. 12</u>			
Policy question: 18	1.76	-1.49	- .47
19	-2.01	-2.15	.18
20	-3.69	-1.34	.06
21	.29	1.33	1.31
Constant	-2.06	-1.53	-1.40
<u>General Purchasing</u>			
<u>Power Accounting</u>			
Policy question: 22	-1.36	3.14	1.79
23	-1.62	.53	- .78
24	1.69	.07	- .80
25	.00	.00	.00
26	- .23	- .67	.00
27	1.36	-2.29	.76
28	.89	-1.09	-1.57
Constant	-2.55	-1.87	-1.83
<u>SFAS No. 13</u>			
Policy question: 29	-3.02	- .67	.37
30	.86	.52	- .19
31	-4.52	-3.51	-2.38
32	1.17	.70	.35
33	8.29	2.80	1.52
34	-1.10	-1.00	- .35
35	-6.16	-2.72	-1.63
36	- .21	- .75	- .03
Constant	-4.22	-2.72	-1.93



Projects	Composite Weights for Groups:		
	(A')	(B')	(C')
<u>SFAS No. 14</u>			
Policy question: 37	3.58	2.23	1.71
38	-1.32	-1.83	-2.34
39	3.68	4.38	3.14
40	1.99	.60	.69
41	-3.91	-1.39	-1.70
42	.70	.82	.26
Constant	-4.94	-4.06	-3.27
<u>SFAS No. 15</u>			
Policy question: 43	.00	.00	.00
44	1.37	1.03	-.51
45	-2.41	-1.81	-1.05
46	-3.86	-.39	-.28
47	3.73	.29	1.60
Constant	-2.44	-1.54	-1.42
<u>SFAS No. 19</u>			
Policy question: 48	7.40	-2.08	1.70
49	-.39	1.76	.31
50	8.43	1.09	.42
51	-3.52	-.92	-.34
Constant	-8.56	-2.65	-1.48

The format of the classification functions is discussed in Chapter 3.



BIBLIOGRAPHY

- American Accounting Association, Committee on Concepts and Standards for External Financial Reports. Statement on Accounting Theory and Theory Acceptance. American Accounting Association, 1977.
- \_\_\_\_\_, Committee to Prepare a Statement of Basic Accounting Theory. A Statement of Basic Accounting Theory. American Accounting Association, 1966.
- American Institute of Certified Public Accountants, Accounting Objectives Study Group. Objectives of Financial Statements. New York: AICPA, October 1973.
- \_\_\_\_\_, APB Statement No. 4, "Basic Concepts and Accounting Principles Underlying Financial Statements of Business Enterprises." New York: AICPA, October 1970.
- Arrow, Kenneth J. Social Choice and Individual Values. New Haven: Yale University Press, 1963.
- Beaver, William H. "Financial Ratios as Predictors of Failure," Empirical Research in Accounting: Selected Studies, 1967, Supplement to Vol. 5, Journal of Accounting Research, 71-102.
- \_\_\_\_\_. "Alternative Financial Ratios as Predictors of Failure," The Accounting Review (January 1968), 71-111.
- \_\_\_\_\_, and Demski, Joel S. "The Nature of Financial Accounting Objectives: A Summary and Synthesis," Journal of Accounting Research (1974 Supplement), 170-187.



BMDP Biomedical Computer Programs, P-Series. Edited by  
M.B. Brown. Berkeley: University of California  
Press, 1977.

Boatsman, James R. "The Policy-Capturing Model Approach  
to the Concept of Materiality in External Report-  
ing." Ph.D. dissertation, The University of  
Texas at Austin, 1973.

Carey, John L. The Rise of the Accounting Profession.  
Vols. 1 and 2. New York: AICPA, 1970.

Cushing, Barry E. "On the Possibility of Optimal Account-  
ing Principles," The Accounting Review (April  
1977), 308-321.

Deakin, Edward B. "A Discriminant Analysis of Predictors  
of Business Failure," Journal of Accounting  
Research (Spring 1972), 167-179.

Demski, Joel S., and Feltham, Gerald A. Cost Determina-  
tions, A Conceptual Approach. Ames, Iowa: The  
Iowa State University Press, 1976.

Edwards, Edgar O., and Bell, Philip W. The Theory and  
Measurement of Business Income. Berkeley:  
University of California Press, 1961.

Eisenbeis, Robert A., and Avery, Robert A. Discriminant  
Analysis and Classification Procedures.  
Lexington, Mass.: D.C. Heath and Company, 1972.

Financial Accounting Foundation. The Structure of Estab-  
lishing Accounting Standards. Stamford, Ct.:  
Financial Accounting Foundation, April 1977.

Financial Accounting Standards Board. Statement of  
Financial Accounting Concepts No. 1, "Objectives  
of Financial Reporting by Business Enterprises."  
Stamford, Ct.: FASB, November 1978.

. Rules of Procedure, Amended and Restated.  
Stamford, Ct.: FASB, March 1978.



Green, Paul E. "Marketing Applications of MDS: Assessment and Outlook," Journal of Marketing (January 1975), 24-31.

Gerboth, Dale L. "Research, Intuition, and Politics in Accounting Inquiry," The Accounting Review (July 1973), 475-482.

\_\_\_\_\_. "'Muddling Through' with the APB," Journal of Accountancy (May 1972), 42-49.

Gilbert, E.S. "The Effect of Unequal Variance-Covariance Matrices on Fisher's Linear Discriminant Function," Biometrics (September 1969).

\_\_\_\_\_. "On Discrimination Using Qualitative Variables," Journal of the American Statistical Association (December 1968), 1399-1412.

Golledge, R.G., and Rushton, Gerard. Multidimensional Scaling: Review and Geographical Applications. Washington, D.C.: Association of American Geographers, 1972.

Gonedes, Nicholas J., and Dopuch, Nicholas. "Capital Market Equilibrium, Information Production and Selecting Accounting Techniques: Theoretical Framework and Review of Empirical Work," Journal of Accounting Research (1974 Supplement), 48-129.

Green, Paul E., and Carmone, Frank J. Multidimensional Scaling and Related Techniques in Marketing Analysis. Boston: Allyn and Bacon, Inc., 1970.

\_\_\_\_\_, and Rao, V.R. Applied Multidimensional Scaling. New York: Holt, Rinehart and Winston, Inc., 1972.

Heyck, T.W., and Klecka, William. "British Radical M.P.s 1874-1895: New Evidence from Discriminant Analysis," Journal of Interdisciplinary History (Autumn 1973), 161-184.



Horgren, Charles T. "Accounting Principles: Private or Public Sector?" Journal of Accountancy (May 1972), 37-49.

\_\_\_\_\_. "Setting Accounting Standards in 1980," unpublished speech before the Arthur Young Professors Roundtable (March 30-31, 1976).

\_\_\_\_\_. "The Marketing of Accounting Standards," Journal of Accountancy (October 1973), 61-66.

Jennings, Alvin R. "Present-Day Challenges in Financial Reporting," Journal of Accountancy (January 1958), 28-34.

Jenson, Michael C. "Reflections on the State of Accounting Research and the Regulation of Accounting," presented at the Stanford Lectures in Accounting (May 21, 1976).

Kamien, Morton I., Schwartz, Nancy L., and Roberts, Donald J. "Exclusion, Externalities, and Public Goods," Journal of Public Economics (1973), 217-230.

Kruskal, Joseph. "Multidimensional Scaling by Optimizing Goodness of Fit to a Nonmetric Hypothesis," Psychometrika (March 1964), 1-27.

\_\_\_\_\_, and Wish, Myron. Multidimensional Scaling. Sage University Paper Series on Quantitative Applications in the Social Sciences, Series No. 07-011. Beverly Hills: Sage Publications, Inc., 1978.

Kuhn, Thomas S. The Structure of Scientific Revolutions. 2nd Edition, Enlarged. Chicago: The University of Chicago Press, 1970.

Lachenbruch, Peter A. "An Almost Unbiased Method of Obtaining Confidence Intervals for the Probability of Misclassification in Discriminant Analysis," Biometrics (December 1967), 639-645.



\_\_\_\_\_, and Mickey, M. Ray. "Estimation of Error Rates in Discriminant Analysis," Technometrics (February 1968), 1-11.

Libby, Robert. "Bankers' and Auditors' Perceptions of the Message Communicated by the Audit Report," Journal of Accounting Research (Spring 1979), forthcoming.

Lindblom, Charles E. "Policy Analysis," American Economic Review (June 1958), 298-312.

\_\_\_\_\_. "The Science of 'Muddling Through,'" Public Administration Review (Spring 1959), 79-88.

\_\_\_\_\_, and Hirschman, Albert O. "Economic Development, Research and Development, Policy Making: Some Converging Views," Behavioral Science (April 1962), 211-222.

\_\_\_\_\_, and Braybrooke, David. A Strategy of Decision. New York: The Free Press, 1963.

MacNeal, Kenneth. Truth in Accounting. Philadelphia: University of Pennsylvania Press, 1939.

May, Robert G., and Sundem, Gary L. "Research for Accounting Policy: An Overview," The Accounting Review (October 1976a), 747-763.

\_\_\_\_\_, and \_\_\_\_\_. "Accounting Policy Decisions as Social Choices," unpublished paper, University of Washington, Seattle (1967b).

Milne, F., and Watts, Ross L. "Corporation Information: A Private or Public Good?", unpublished paper, University of Rochester, New York (1977).

Moonitz, Maurice. The Basic Postulates of Accounting. Accounting Research Study No. 1. New York: AICPA, 1961.



- Mueller, D.C. "Public Choice: A Survey," Journal of Economic Literature (June 1976), 395-433.
- Paton, William A. Accounting Theory. New York: The Ronald Press Company, 1922.
- \_\_\_\_\_, and Littleton, A.C. An Introduction to Corporate Accounting Standards. American Accounting Association, 1940.
- Pearson, Michael A., Lindgren, Jr., John H., and Myers, Buddy L. "A Preliminary Analysis of AudSEC Voting Patterns," Journal of Accounting, Auditing and Finance (Winter 1979), 122-134.
- Peston, M.H. Public Goods and the Public Sector. London: The Macmillan Press Ltd., 1972.
- Powell Report, "Report to Council of the Special Committee on Research Program," Journal of Accountancy (December 1958), 62-68.
- Quirk, J., and Saponsnik, R. Introduction to General Equilibrium Theory and Welfare Economics. New York: McGraw-Hill Book Company, 1968.
- Rabinowitz, George B. "An Introduction to Nonmetric Multidimensional Scaling," American Journal of Political Science (May 1975), 343-390.
- Revsine, Lawrence. Replacement Cost Accounting. Englewood Cliffs: Prentice-Hall, 1973.
- Rockness, Howard O., and Nikolai, Loren A. "An Assessment of APB Voting Patterns," Journal of Accounting Research (Spring 1977), 154-167.
- Samuelson, Paul A. Foundations of Economic Analysis. Cambridge: Harvard University Press, 1947.



- Shepard, Roger N., Romney, A. Kimball, and Nerlove, Sara Beth. Multidimensional Scaling, Theory and Applications in the Behavioral Sciences. Vol. 1. New York: Seminar Press, 1972.
- Snedecor, George W., and Cochran, William G. Statistical Methods. Ames, Iowa: The Iowa State University Press, 1967.
- Sprouse, Robert T., and Moonitz, Maurice. A Tentative Set of Broad Accounting Principles for Business Enterprise. Accounting Research Study No. 3. New York: AICPA, 1962.
- Takane, Yoshio, Young, Forrest W., and deLeeuw, J. "Non-metric Individual Differences Multidimensional Scaling: An Alternating Least Squares Method with Optimal Scaling Features," Psychometrika (March 1977), 7-67.
- U.S. Congress. House. Subcommittee on Oversight and Investigations. Federal Regulation and Regulatory Reform (Moss Report). 94th Cong., 2d sess., 1976a.
- U.S. Congress. Senate. Subcommittee on Reports, Accounting and Management of the Committee on Government Operations. The Accounting Establishment (Metcalf Report). 94th Cong., 2d sess., 1976b.
- Watts, Ross L., and Zimmerman, Jerold L. "Towards a Positive Theory of the Determination of Accounting Standards," The Accounting Review (January 1978), 112-134.
- \_\_\_\_\_, and \_\_\_\_\_. "Corporate Financial Statements, A Product of the Market and Political Processes," Australian Journal of Management, 2, 53-75.
- Wheat Report. Establishing Financial Accounting Standards. New York: AICPA, 1972.



Wildavsky, Aaron. The Politics of the Budgetary Process. Boston: Little, Brown and Company, 1964.

Young, Forrest W., and Lewyckyj, Rostyslaw. ALSCAL 4 User's Guide. Chapel Hill, N.C.: L.L. Thurstone Psychometric Laboratory, University of North Carolina, 1979.

Brown on July 14, 1950, in Lancaster, Pennsylvania. After graduating in 1968 from Cedar Crest High School, Lebanon, Pennsylvania, he entered the University of Rhode Island. He transferred from Rhode Island after two years to Franklin and Marshall College, Lancaster, Pennsylvania. In May 1972, he received the B.S. degree from that college in business administration, graduating with Phi Beta Kappa honors. For two years he worked as a staff accountant in the Philadelphia office of Andersen & Co. During that time, he passed the CPA exam and was licensed as a CPA in Pennsylvania. From 1974 to 1977, he worked for the Financial Accounting Standards Board as an assistant to Walter Schwenke, one of the four original members of the Board. In Fall 1977, he joined the Graduate School of the University of Texas at Austin. In August 1978, he was awarded the Ph.D. degree from The University of Texas at Austin.



The vita has been removed from the digitized version of this document.



The vita has been removed from the digitized version of this document.